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| Project No. | 1 |
| Company type | Industry Personnel |
| Organization | India Health Link Pvt Ltd |
| Problem statement title | Smart body posture recognition & Guiding system |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | We have a self service wellness KIOSK that measures health vital parameters like BMI, BMC, BP, ECG, Pulse, Temp. And it designed to be non-assisted while user measures the vitals. A right body posture yields a correct result. We wanted the system should capture the image of the uses body posture like hand, leg etc via camera and through image processing; Compare the required postures for particular test, Analyse and guide users to have right posture in case the test is not carried out proper |
| You tube Link | <https://www.youtube.com/watch?v=__N6D3eydq4&app=de> |

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| Project No. | 2 |
| Company type | Industry Personnel |
| Organization | India Health Link Pvt Ltd |
| Problem statement title | Personal Health Influencers through social network |
| Category | software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Build an API for IHL users (from IHL platform) to choose/select their friends/others from facebook, LinkedIN, whatsapp, others to form a group to play a challenge like average no of steps in a month, healthy food habits, health vitals (decrease in weight/BP etc.Gamify user experience to win rewards, badges etc. |
| You tube Link | <https://www.youtube.com/watch?v=HxdFjL71lmg&featur> |

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| Project No. | 3 |
| Company type |  |
| Organization | Thermo Fisher |
| Problem statement title | Real Time Mapping of Epidemic Spread |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | We envision a simple portal which shall provide real time data on how an epidemic is and can spread. Real time status and alerts will be the primary objective of this project. To achieve this objective, we will need to build layers of crowd sourced data that will add up to provide rich real time status of an epidemic spread as it happens. |
| You tube Link | <https://www.youtube.com/watch?v=HxdFjL71lmg&featur> |

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| Project No. | 4 |
| Company type | Industry Personnel |
| Organization | Mahindra&Mahindra(FarmEq) |
| Problem statement title | Low cost & smart cooling system for tractor cabin |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | intent is to a design a smart cabin & cooling system for the tractor that would employ a very thoughtful design of a. cabin ensuring all round visibility b. Alternatively, new innovative concepts of cooling without a cabin can also be thought of, cooled seat c. Smart cooling system d. a smart cooling algorithm e. low cost design f. carbon footprint should be at least 50% less and should be compatible for future electric tractors |
| You tube Link | <https://www.youtube.com/watch?v=8kazDWnvBkI> |

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| Project No. | 5 |
| Company type | Industry Personnel |
| Organization | Mahindra&Mahindra(FarmEq) |
| Problem statement title | Low cost on the go soil sensing and mapping attached to implements |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | Soil Health and Soil Mapping is important for the plant growth and productivity of the Farming. There is an important need to determine NPK (Macro), Micro Nutrients, Electrical conductivity, soil compactness, Organic Content, Soil Moisture, PH value to determine the soil health and map it against the GPS location. GPS tagged information will help user to correct amount of fertilizer at correct location. The soil health data card is very important parameter to monitor for every crop season. |
| You tube Link | <https://www.youtube.com/watch?v=lJ5xdAV-NKk> |

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| Project No. | 6 |
| Company type | Industry Personnel |
| Organization | Mahindra&Mahindra(FarmEq) |
| Problem statement title | Uplifting the Farmer through a Connected Ecosystem |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | How can a farmer gain access to all the elements of his farming cycle?one stop shop where he has access to information from different aggregators, for retailing , leasing & finally taking his produce to the nearest mandi. Application to provide a means of easy transaction for all his farming activities and his personal expenses. Agri credit should help him buy/lease Farm Machinery & have access to all the local vendors for his plantation needs including expert advice from the local university |
| You tube Link | <https://www.youtube.com/watch?v=oSe4T8WKbC0> |

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| Project No. | 7 |
| Company type | Industry Personnel |
| Organization | Saguna Rural Foundation |
| Problem statement title | A seed sowing machine for Zero-Till farming |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | The machine should operate on a permanent raised bed of 100 cm width which can sow seeds with fertilizer in 5 rows at 25 cm apart. Seeds - rice, gram, pea, groundnut, bajra, maize, Val, etc. Mechanism should be preferably impact dibbler or it should make very thin slit of max depth of 30-40 cm. It should cover the seeds after sowing and be operated by 1-2 people either manually or by 1 hp power and sow 0.6 to 1 ha in 8 hours. Potential of it being self-driven to get higher speed. |
| You tube Link | <https://www.youtube.com/watch?v=o7TUzoTFuQA&featur> |

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| Project No. | 8 |
| Company type | Industry Personnel |
| Organization | Praj Industries Limited. |
| Problem statement title | Development of Non-fouling metallic surfaces/coats |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Simple |
| Description | To concentrate effluent generally evaporation technic is used. During evaporation plant operation, due to inorganic & organic contents in effluent, fouling occurs on surface of tubes after some duration. This reduces the capacity of plant & need to be cleaned by Cleaning In Place (CIP). If we find the suitable Non-fouling metallic surfaces / coatings for tubes, we can reduce the CIP chemical & water consumption & down time of cleaning. This can give benefit for plant operation and water saving. |
| You tube Link | <https://www.youtube.com/watch?v=7M9w842jtfQ&featur> |

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| Project No. | 9 |
| Company type | Industry Personnel |
| Organization | Praj Industries Limited. |
| Problem statement title | Removal of Volatile Acids (eg AA) in waste stream. |
| Category | Software |
| Technology Bucket | Clean Water |
| Complexity | Simple |
| Description | During various unit operations vapors are getting generated for separation of water, which are then condensed. While handling the effluents, process mixtures, the volatile acids are coming out along with vapors and then in condensate, which is generally colorless. For recycle & reuse of this separated water, we have to treat this to remove volatile acids (main component Acetic Acid). If we innovate / develop techno-economic solution for removal of such volatile acids, lot of water will be reused |
| You tube Link | <https://www.youtube.com/watch?v=XeS3239poaw&featur> |

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| Project No. | 10 |
| Company type | Industry Personnel |
| Organization | SSEPL Skills Pvt Ltd. |
| Problem statement title | Online Adaptive Assessment Platform |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Aspirants/Students can be assessed on different fields using this website. Fields can be Reasoning, Aptitude, Technical MCQ, Coding etc. This will be an online platform with questions at different levels (Difficulty). Candidate would start at assessment with a medium difficulty question and depending on its response, the platform should decide the next level of questions to be shown (level would increase or decrease as per response). Each question would be assigned a weightage and time duratio |
| You tube Link | <https://www.youtube.com/watch?reload=9&v=N0T851LPU> |

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| Project No. | 11 |
| Company type | Industry Personnel |
| Organization | ABB GIS Pvt Ltd |
| Problem statement title | Big Data challenges for the e-Mobility |
| Category | Software |
| Technology Bucket | Smart Vehicle |
| Complexity | Simple |
| Description | An EV user must be assured that power will be available when needed especially in an unfamiliar area. A route optimization approach based on Machine Learning needs to be considered to ensure that vehicle drivers are led to the nearest or their preferred e-Station. |
| You tube Link | <https://www.youtube.com/na> |

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| Project No. | 12 |
| Company type | Industry Personnel |
| Organization | ABB GIS Pvt Ltd |
| Problem statement title | Big Data challenges for e-Mobility- infra operator |
| Category | Software |
| Technology Bucket | Smart Vehicle |
| Complexity | Simple |
| Description | The E-Charging Operators (equivalent of today’s petrol pump operators) need a Big Data approach to ensure their customers (end-users) satisfaction and optimum utilization of the e-Charging stations. The operator may have fast or slow charging infrastructure with their own payment terms and timings. Based on a data-centric approach the operator can offer dynamic pricing at stipulated times and manage the peak demand accordingly. |
| You tube Link | <https://www.youtube.com/na> |

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| Project No. | 13 |
| Company type | Industry Personnel |
| Organization | ABB GIS Pvt Ltd |
| Problem statement title | Big Data challenges for e-Mobility- Smart City |
| Category | Software |
| Technology Bucket | Smart Cities |
| Complexity | complex |
| Description | A Smart city will have various elements like power, water, etc monitored through a central control room. The Control Center will be the single source of information for administrators and decision makers. The new set of challenges faced by a Smart Grid, e-Charging network and e-Vehicle users culminate in the Smart City Control room as an indicator of traffic movement/congestion, power demand and various other related parameters. The solution need to be integrated into the Smart city control room |
| You tube Link | <https://www.youtube.com/na> |

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| Project No. | 14 |
| Company type | Industry Personnel |
| Organization | ABB GIS Pvt Ltd |
| Problem statement title | Locate faults in Power Distribution Networks |
| Category | Software |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | complex |
| Description | Over the time, cities have built the power distribution asset in phases with varied product technologies. At the time of faults in the physical infrastructure, the distribution utilities take huge time to identify and pin point the fault in the physical infrastructure (especially the cable faults, which is mix of overhead and underground infra). Also, faults in networks are catered to only after they occur. A low cost prediction solution will help in better planning for ad-hoc maintenance. |
| You tube Link | <https://www.youtube.com/na> |

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| Project No. | 15 |
| Company type | Industry Personnel |
| Organization | Hughes Systique Pvt Ltd |
| Problem statement title | Secure distributed transaction recording system |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Design a system by which we can record and make visible/non-falsifiable/non-repudiable the different transactions between a common citizen and a govt. department for getting and managing a particular form of license/permit. For a specific example, we consider the driving permit. The system should be able to track the different transactions starting from getting the permit (retail/commercial), renewal, recording of traffic rule violations, and possibly, revocation/suspension |
| You tube Link | <https://www.youtube.com/watch?v=1wlQyFhD_dU&featur> |

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| Project No. | 16 |
| Company type | Industry Personnel |
| Organization | Quick Heal |
| Problem statement title | Effectively writing YARA rules to detect malwares |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | • Search engine for YARA signature pattern selection. • Automatically generating YARA rules/signatures that cover a specific set of files. • Short scanning time for YARA signatures on large amount of data (clean set) for identifying the best signature candidate. • The generated YARA rules should be generic i.e. single signature should cover multiple malware samples. |
| You tube Link | <https://www.youtube.com/watch?v=GxLPIqtRgIE> |

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| Project No. | 17 |
| Company type | Industry Personnel |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | Common Corporate Social Responsibility(CSR) Portal |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Currently most organisation have their own CSR activities and perform social events separately. Due to lack of resources and budgets, it limits their ability to perform these activities on larger scale or remote areas. Also other corporates may not be aware of such events, so that they can participate as well. So idea is to develop an organised Common CSR portal where different corporates or individuals can come together and collectively provide valuable service to society. |
| You tube Link | <https://www.youtube.com/watch?v=09hpnAUmtuI&t=20s> |

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| Project No. | 17 |
| Company type | Industry Personnel |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | Birth/Death Registration Integration With Services |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | There are different services which are linked to Birth and Death of an individual. If these services are integrated together it will help individuals. Maternity Nursing home register’s child birth to Municipal Office Then Parent / guardian can one time enter the name of their child and get a print of Birth Certificate after few days. No need to visit MO. In case of Death registration at MO then build a system which will notify all tear down services to update death status of the individual. |
| You tube Link | <https://www.youtube.com/watch?v=QDZz3Yq7YTM&t=24s> |

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| Project No. | 18 |
| Company type | Industry Personnel |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | Birth/Death Registration Integration With Services |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | There are different services which are linked to Birth and Death of an individual. If these services are integrated together it will help individuals. Maternity Nursing home register’s child birth to Municipal Office Then Parent / guardian can one time enter the name of their child and get a print of Birth Certificate after few days. No need to visit MO. In case of Death registration at MO then build a system which will notify all tear down services to update death status of the individual. |
| You tube Link | <https://www.youtube.com/watch?v=QDZz3Yq7YTM&t=24s> |

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| Project No. | 19 |
| Company type | Industry Personnel |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | Ambulance Services |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Ambulance services are important for Health & Medical facilities. Requirement is to build a mobile app similar to Ola / Uber cab services. But it will be for Ambulance services. This app will have Ambulance driver’s register their availability and location. Both Executive at Emergency Helpline and User’s on the other hand on App’s Client interface will book an ambulance. This will promise a fast and reliable ambulance service in case of emergency. |
| You tube Link | <https://www.youtube.com/watch?v=ui4o6zOdA7k> |

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| Project No. | 20 |
| Company type |  |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | India Vs Pollution |
| Category | Software |
| Technology Bucket | Sustainable Environment |
| Complexity | Complex |
| Description | Every day we come across several sources of pollution, polluting the very basics of our lives- Rivers, Land, Air and Noise. We know nothing about who/where to report it and how. We suggest an Innovative way to identify the sources of pollution in your area, get it prioritized through people votes, escalate it to the concerned authorities, keep a track of the progress and get notified of the actions taken. It will provide an End-2-End tool to battle pollution democratically partnering with Govt. |
| You tube Link | <https://www.youtube.com/watch?v=n8S-ewKNSbk> |

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| Project No. | 21 |
| Company type | Industry Personnel |
| Organization | ezDI |
| Problem statement title | Inconsistency Detection in Medical Annotation |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | complex |
| Description | Text in clinical documents is annotated to tag the words or phrases as problems, diagnoses, procedures, drugs etc and identify the relationship between them. Semantically similar words can be annotated differently by different annotators due to ambiguity in understanding the guidelines, incomplete experience or human errors. Identifying inconsistencies can help in improving the data quality You need to develop a tool to display these similar entities which have different patterns of annotations. |
| You tube Link | <https://www.youtube.com/watch?v=vx4PNSpE1wg> |

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| Project No. | 22 |
| Company type | Industry Personnel |
| Organization | ezDI |
| Problem statement title | Patient Case Similarity |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | The objective of patient case similarity is to identify similar patients based on their medical reports. Identification of similar patient cases be useful for improving patient outcome, for treatment or drug recommendation to a new patient, prediction of clinical outcome, clinical decision support, research on those cases. Task: Applying machine learning algorithms to find similar patient cases from given dataset. You can refer youtube link and documentations attached to it for more details. |
| You tube Link | <https://www.youtube.com/watch?v=skDcDRBdfNI> |

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| Project No. | 23 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Drone Doctors |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | complex |
| Description | TITLE: "Drone Doctors: Deep Learning of plant topography for predictive / prescriptive analysis against pest and diseases". BACKGROUND: Crop losses owing to pest & diseases are inherent in Indian agriculture with the annual loss of 15-25% of productivity. Pest & diseases are complex, crop/region specific, seasonal, epidemic/endemic, which require integrated approaches to manage the loss. Due to the level of complexity, diagnosis for preventive measures are challenging, particularly our inability to (fore)see the pest/disease occurrence and their life cycle, while the level of difficulty raises with the size of land holdings. Due to the poor visibility of pest and disease occurrences, our ability to integrate and use the data for preventive/prescriptive measures has been the challenge leading to continuous productivity loss. PROBLEM DESCRIPTION: Crop loss is generally diagnosed by the symptoms developed by pest and diseases, while manual diagnosis has a very limited scope in identifying the damaged plant parts, while recognizing the pattern of pest/disease distribution almost close to impossible in large area. Drone based scanning the large area using both visible and near-infrared light, could help track changes in plants at large scale and identify the distribution pattern very precisely. Further, an artificial intelligence (AI) driven software could process the images; integrate the existing knowledge and develop the solutions in real-time. In addition, such approach could also open the scope of predictive analysis to execute automate alert to the farmers, potentially improve the crop productivity to more than 20%. PROBLEM STATEMENT: To build a custom drone and integrated software with AI for predictive/prescriptive model against pest and diseases in crop plants. The proposed requirements are as follows, A: HARDWARE 1. Drone integrated with IR lenses 2. Communication device for data transmission to cloud B. SOFTWARE 1. “Intelligent” Software that process the digital images; extract the binaries; categorize them to diagonise the biotic stress; integrate with existing knowledge; execute the predictive / prescriptive analysis and generate alerts for communication. 2. Cloud environment with management dashboard PROJECT DELIVERABLES: 1. An aerial survey and data collection system, fully functional with visible and IR lenses. 2. Managed communication of the images/data to the cloud. 3. AI driven Software – fully functional for predictive and prescriptive analytics 4. Alert system for users (including farmers) in various formats including RSS feeds (for news channels) and mobile applications. ----------------------------- |
| You tube Link | <https://www.youtube.com/watch?v=xjY58OAXUTs> |

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| Project No. | 24 |
| Company type |  |
| Organization | Forbes Marshall Pvt. Ltd |
| Problem statement title | Steam Trap Health Monitoring |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | To develop a steam trap failure detection system which can detect steam trap failures remotely, accurately and in real-time. The solution should be non-intrusive and should make use of wireless mode of communication. (A video of one kind of steam trap operation is shared) |
| You tube Link | <https://www.youtube.com/watch?v=KMHtWLayJjI> |

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| Project No. | 25 |
| Company type |  |
| Organization | Forbes Marshall Pvt. Ltd |
| Problem statement title | Efficient and Robust Float Design |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Problem Statement – Design a Float that is very light in weight, for working condition of Pressure 20Bar & Temperature 220°C. The Float should be able to withstand 100 cycles of external high pressure pulse of 100Bar. Additional details – In many process plants steam is used as a source of energy. Efficient distribution of steam is critical for maintaining process parameters and ensuring that energy wastage is minimal. An important equipment, part of the distribution network, is the steam trap. A Steam trap is an automatic drain valve which distinguishes between steam and condensate. A well-functioning steam trap will hold back steam in the distribution line while discharging condensate under varying pressures or loads. When the steam trap fails, it can lead to water logging (condensate) in distribution pipes, thus reducing the efficiency of steam energy, disturb process parameters, or even lead to wastage of steam through discharge in open atmosphere. Steam traps are mechanical equipment which employs different principles such as buoyancy, pressure, temperature etc. for their operation. A ball float type trap is based on the buoyancy principle where rise in condensate level lifts the ball float, opening the orifice and allowing the condensate to be flushed out of steam carrying pipes. In certain processes, typically on -off heating processes, opening of the valve causes sudden discharge of condensate at very high velocity to the trap. The high velocity water discharge impinges on the float causing it to implode. The ON-OFF cycles expose float to thermal cycle. An efficient and robust design of float is desired to overcome this problem. Currently, Float of 32 gms ( ±4gms), Diameter 57mm , working Pressure 20Bar and Temperature 220°C is used in typical Float Traps. (A video of one kind of steam trap operation is shared) |
| You tube Link | <https://www.youtube.com/watch?v=KMHtWLayJjI> |

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| Project No. | 26 |
| Company type | Industry Personnel |
| Organization | Bharat Forge Ltd. |
| Problem statement title | Development of 30 Kg Payload capacity multicopter |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | This project is for Design and Development of Multicopter for additional Payload Capacity of 30 kg. This copter must have endurance of minimum 45 minutes and should fly at 800 - 1000 meters above take off ground. decision regarding number of arms for the copter and material selection is can be taken by students. |
| You tube Link | <https://www.youtube.com/watch?v=aS1u4bHdZAg&pbjrel> |

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| Project No. | 27 |
| Company type | Industry Personnel |
| Organization | SKF India Ltd. |
| Problem statement title | Zero Defect Manufacturing at Suppliers |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Description - process variations within supplier factory create dimensional variability in the produced parts as well as creates outliers. Standard SPC charts are unable to catch specially the outliers. Efforts to weed out these variations / outliers are manual, costly & time consuming + they are not foolproof. This affects manufacturing cycle time variations on SKF Channels thereby limiting the productive output. A solution can be developed to identify key variables in the supplier factory & monitor them on real time basis. All cases of dimensional variations will be separated online Explanation - this automated solution is expected to give real time signals to correct the variations in order to center the process outcomes & improve process capability at suppliers. Eventually this should help SKF to reduce the cycle time on channel to increase the output further. |
| You tube Link | <https://www.youtube.com/watch?v=9e5yTjehwco> |

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| Project No. | 28 |
| Company type | Industry Personnel |
| Organization | SKF India Ltd. |
| Problem statement title | Real time info: suppliers supply chain planning |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Component suppliers plan raw material procurement and their internal manufacturing processes as per the 'forecast' from SKF. Any delay due to manufacturing / dispatch of raw material due to machine breakdown, workmen absenteeism, over booking by customers wrt capacity etc, can delay deliveries to customers in turn affecting final customers. A system to be developed to know real time status of all vital activities/ actions to customer & advance warning alarm should go off in case of any delays |
| You tube Link | <https://www.youtube.com/watch?v=QDytTsvCnGo> |

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| Project No. | 29 |
| Company type | Industry Personnel |
| Organization | SKF India Ltd. |
| Problem statement title | Automated system for Material Return from Customer |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | In case of excess supply, wrong/damaged deliveries to end customers, SKF customer service team returns the product back to regional warehouse irrespective of condition of material. Hence, sometimes we (India Distribution Centre) end up receiving damaged stocks even after an ok Proof of Delivery which results in blocked stocks and we end up scrapping them leading to loss. A solution can be developed that a proper justification for return is mentioned and right decision on return of goods is taken |
| You tube Link | <https://www.youtube.com/watch?v=5tPWHTKjjqM> |

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| Project No. | 30 |
| Company type |  |
| Organization | SSEPL Skills Pvt Ltd. |
| Problem statement title | Smart and Dynamic Time Table Management System |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | This platform would be generating time table for a college/school/institution based on the input of trainer’s skills, trainers load hour, session duration, no. of days of training. This platform would generate the time table in the start of academic session based on the provided input. Dynamic nature of this platform would be in adjusting the vacant classes in case of trainers’ absence due to any reason. This platform should automatically allocate the free classes to appropriate trainer of same |
| You tube Link | <https://www.youtube.com/results?search_query=https> |

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| Project No. | 31 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Efficient Farming |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | A mobile application that the farmers can use to hire tractors as well as other mechanizations at a nominal amount all using their mobile phones. This would not only help them avoid manual labor but can be also be considered as an important step to encourage this profession. |
| You tube Link | <https://www.youtube.com/watch?v=ox-Wjv5U-rU&featur> |

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| Project No. | 32 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Invoice Processing using RPA |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | One of our Client processes approximately 1500 invoices per day received from 250 surveyors in 15 different formats. All those are of pre-defined format containing no hand written text. Each document spans across approximately 3 pages. it can be, • mobile captured images • Scanned PDFs. Data retrieved from the invoices (including item name, etc.)are updated into CRM application. However, it refers to items with names which is different from the one specified in invoice. (For E.g., Invoice Item Name: Front Wheel, CRM Item Name: F.Wheel). Design and propose an automation solution, which will automate the above business process, considering that all the invoices are made available in a pre-defined File Server. |
| You tube Link | <https://www.youtube.com/watch?v=2_8R91ijxvY&featur> |

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| Project No. | 33 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Finance Receipting using Robotic Process Automatio |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | A client needs to automate a back office process which has a volume of 25000 receipts per month. The information is structured, with pre-determined rules and conditions. The process has 10% of exceptions and also involves the use of paper. The source file is downloaded from SAP application, from which data is retrieved. Based on transaction type, client details are segregated as either Card or Cheque. Segregated user information is fed to the web application. For each Receipt number, templates are used to generate receipts and the same is mailed to the vendor specified in the source file. Each transaction type has its own template, which is available in the File Server. Design an automation solution which will automate the above process and email the receipts to corresponding vendor. |
| You tube Link | <https://www.youtube.com/watch?v=UQ3TZalJwSs&featur> |

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| Project No. | 34 |
| Company type | Industry Personnel |
| Organization | Quick Heal |
| Problem statement title | High Performance Network Intrusion Detection Engine |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Develop a network intrusion detection system with high network throughput. The system should scan, classify and monitor the network traffic in realtime without affecting the network throughput. Following are the features - Real time traffic analysis - Protocol analysis - Content searching - Detect variety of attacks and probes |
| You tube Link | <https://www.youtube.com/watch?v=ccIAkrJ96Jw> |

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| Project No. | 35 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | TechAgri |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | Our farmers are well too behind in using technologies and advanced methodologies to grow the crops. Every year we see that the farmers are committing suicide due to the bad crop (various reasons), or bad rates for the crops and loan sharks. What if there is a platform for the farmers, which is easy to understand and use, to enable them to utilize the power of technology in their farming? |
| You tube Link | <https://www.youtube.com/watch?v=VYhR2hU6HD8> |

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| Project No. | 36 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Mask Free Air |
| Category | Hardware |
| Technology Bucket | Sustainable Environment |
| Complexity | Complicated |
| Description | We have seen cases of bad air quality indices across Indian metro and major cities. Last year, Delhi was at its worst! Residents were using masks wherever they go. How do we reduce the smog? How can we commercialize the collected carbon as well? |
| You tube Link | <https://www.youtube.com/watch?v=NkQsBIQCzDY> |

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| Project No. | 37 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | RADAR on Roads |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | There will be huge pile of vehicles waiting to pass through the toll booths over weekends around many cities. Though the NHAI has introduced FASTag RFID stickers, it still doesn’t address the issue. In many places its still not functional and at few it’s partially working. Places where it’s working, the vehicle needs to go slow so the sensors to detect the sticker and deduct the toll fare. What if we had a system which is similar or better to one being used in Dubai? |
| You tube Link | <https://www.youtube.com/watch?v=WkKWqGakEx8> |

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| Project No. | 38 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Mechanism to save medines from getting wasted |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | There will be huge pile of vehicles waiting to pass through the toll booths over weekends around many cities. Though the NHAI has introduced FASTag RFID stickers, it still doesn’t address the issue. In many places its still not functional and at few it’s partially working. Places where it’s working, the vehicle needs to go slow so the sensors to detect the sticker and deduct the toll fare. What if we had a system which is similar or better to one being used in Dubai? |
| You tube Link | <https://www.youtube.com/watch?v=WkKWqGakEx8> |

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| Project No. | 39 |
| Company type | Industry Personnel |
| Organization | Quick Heal |
| Problem statement title | Collective Threat Intelligence Framework |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Adopting a collaborative approach to sharing the threat intelligence has its own benefits. The volume of threat incidences along with sophistication of techniques used demands implementation of effective protective system. You always see only view through one angle and no one has the full picture. Ability to find needle in a haystack gives the notion of today's threat landscape. The system should build capability of collective threat intelligence to prioritize, focus and detect threats. |
| You tube Link | <https://www.youtube.com/watch?v=ly_0WjDvdD8> |

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| Project No. | 40 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Consistent Product Moisture in manufacturing |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | TITLE: Time Series Machine Learning based Prediction Model to achieve consistent Product Moisture in manufacturing BACKGROUND: Achieving consistency in product quality is one of the key objectives in a manufacturing process. The product quality in a process is affected by both, process and environmental parameters. In case of a hygroscopic organic product, moisture plays a vital role in determining the end product quality. In the case of this problem it is crucial to maintain the end product moisture level within a narrow band for superior product quality. To achieve the same, online control of various process parameters is required in manufacturing. PROBLEM DESCRIPTION: The manufacturing process of this product has a drying step which is controlled to get the end product moisture within limits. However, post drying, the retention time and conditions in further process steps impact the final product moisture. The incoming material loses moisture in the drying process. The dryer process parameters are controlled through a PID loop with short and long term levers. Post drying, the product is stored in a conditioned environment and is transferred for manufacture as per requirement. Product interacts with the surrounding environment while residing in the storage area and the manufacturing process. Due to these interactions, the product moisture changes from the desired value of 13.5+/-0.3%. Building a time series machine learning model to predict Ex- Dryer moisture set point will help to achieve Ex-Packing moisture within 13.5+/-0.3% with maximum accuracy. PROBLEM STATEMENT: To build a Time series Neural Network (LSTM/GRU) model to predict Dryer set point in order to achieve Ex-packer moisture within 13.5+/-0.3 PROJECT DELIVERABLES: 1. To develop a time series machine learning model to predict Dryer moisture set point in order to achieve Ex-packer moisture within 13.5+/-0.3 % a. To counter the variation of the ambient & storage conditions, the target variable (Ex-Dryer Moisture) is changed to bring the final product moisture (var13) in the spec range of 13.5+/-0.3%. 2. Desired Accuracy Level (For Training and Model Learning): 96% accuracy has been achieved. Further improvement is desired to achieve accuracy of 98+% levels 3. Desired Accuracy Level (For Testing): The built model should be tested on data points which have Ex-packer moisture (var13) within 13.5+/-0.3 %, predicting the target dryer set point value as close to actual set point value with an accuracy of 99%+. ------------------------------ |
| You tube Link | <https://www.youtube.com/watch?v=-kPnW4Rzt1I&t=35s> |

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| Project No. | 41 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Consistent Product Moisture in manufacturing |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | TITLE: Time Series Machine Learning based Prediction Model to achieve consistent Product Moisture in manufacturing BACKGROUND: Achieving consistency in product quality is one of the key objectives in a manufacturing process. The product quality in a process is affected by both, process and environmental parameters. In case of a hygroscopic organic product, moisture plays a vital role in determining the end product quality. In the case of this problem it is crucial to maintain the end product moisture level within a narrow band for superior product quality. To achieve the same, online control of various process parameters is required in manufacturing. PROBLEM DESCRIPTION: The manufacturing process of this product has a drying step which is controlled to get the end product moisture within limits. However, post drying, the retention time and conditions in further process steps impact the final product moisture. The incoming material loses moisture in the drying process. The dryer process parameters are controlled through a PID loop with short and long term levers. Post drying, the product is stored in a conditioned environment and is transferred for manufacture as per requirement. Product interacts with the surrounding environment while residing in the storage area and the manufacturing process. Due to these interactions, the product moisture changes from the desired value of 13.5+/-0.3%. Building a time series machine learning model to predict Ex- Dryer moisture set point will help to achieve Ex-Packing moisture within 13.5+/-0.3% with maximum accuracy. PROBLEM STATEMENT: To build a Time series Neural Network (LSTM/GRU) model to predict Dryer set point in order to achieve Ex-packer moisture within 13.5+/-0.3 PROJECT DELIVERABLES: 1. To develop a time series machine learning model to predict Dryer moisture set point in order to achieve Ex-packer moisture within 13.5+/-0.3 % a. To counter the variation of the ambient & storage conditions, the target variable (Ex-Dryer Moisture) is changed to bring the final product moisture (var13) in the spec range of 13.5+/-0.3%. 2. Desired Accuracy Level (For Training and Model Learning): 96% accuracy has been achieved. Further improvement is desired to achieve accuracy of 98+% levels 3. Desired Accuracy Level (For Testing): The built model should be tested on data points which have Ex-packer moisture (var13) within 13.5+/-0.3 %, predicting the target dryer set point value as close to actual set point value with an accuracy of 99%+. ------------------------------ |
| You tube Link | <https://www.youtube.com/watch?v=-kPnW4Rzt1I&t=35s> |

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| Project No. | 42 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Online Inspection of Packed Cases |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | TITLE: Leveraging Artificial Intelligence & Image Processing for Online Inspection of Packed Cases 1.BACKGROUND: Leaves of a crop are threshed and are packed into 200 Kg cases. 10% of these packed cases are later inspected for conformity to the master case approved by the customer in terms of Color, Ripeness and Uniformity. The quality inspection processes are manually operated and rely on the judgmental experience of the experts. The judgment is heavily driven by personal, business and environmental factors and is highly subjective. 2. PROBLEM DESCRIPTION: Inspection is a crucial activity to ensure customer satisfaction. Although it doesn’t eliminate the defects in the product, it helps identify the defective products before they are dispatched to the customer. The limitations with the existing inspection process is multi-fold. • While Customer expects all the cases to be inspected, due to space and man-power constraints, today, the business is able to achieve only 10% inspection. • As the inspection process happens one day after the cases are processed, due to limitations with Expert availability, real-time corrective actions in the factory in case of deviations in product quality gets difficult • Due to human involvement in the visual inspection, there is inherent subjectivity involved in the process 3. PROBLEM STATEMENT: To automate in real-time, the packed case inspection using Machine Learning and Image Processing techniques and enhancing the objectivity of the inspection process. 4. PROJECT DELIVERABLES: (a) To develop 3 separate algorithms which imitate Color, Ripeness and Uniformity inspection while keeping the processing time for each of the algorithms under 1 minute each (b) The developed Algorithms to be generic of the grade type for all Color, Ripeness and Uniformity dimensions (c) To identify patterns for Color, Ripeness & Uniformity inspection, if any by understanding the way Algorithm is functioning --------------------------- |
| You tube Link | <https://www.youtube.com/watch?v=vvIBcEfss9A> |

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| Project No. | 43 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Packaging format and design optimizer |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | TITLE: Packaging format and design optimizer for packaged food products 1. BACKGROUND: The packaging format design is currently based on trial and error for most of the packaged food products. The packaging format decides the damage any food product will undergo, especially during transit and handling. Especially for biscuits, product breakage is a prime concern, and any packing format is decided retrospectively based on the damage endured during transits (mostly by evaluating breakage). A simulation based model would solve this problem, just like any mechanical design, if packaging design can be tested for relative preference. 2. PROBLEM DESCRIPTION: Packaging format for food products need to be designed based on a simulation model. This model should involve a multi body dynamics study to evaluate the maximum forces the final packaged food will be subject to during transit and handling. A simulation has to be done basis forces that products undergo during the journey in the supply chain. 3. PROBLEM STATEMENT: To build a computer simulation model for optimizing packaging design for a given packaged food 4. PROJECT DELIVERABLES: (a) A comprehensive stimulation model which will help in designing the optimized packaging format. (b) The simulator should identify and recommend the areas that need to be strengthened for a given load distribution so as to minimize the effects on the product. (c) The model has to be made modular taking inputs from different aspects of transit in the supply chain and should be able to be generalized to any product. --------------------------- |
| You tube Link | <https://www.youtube.com/watch?v=miscGsDFmE0> |

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| Project No. | 44 |
| Company type | Industry Personnel |
| Organization | ITC Limited |
| Problem statement title | Intelligent Food packaging |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | TITLE: Intelligent Food Packaging: Time – Temperature Sensors to deliver Super-Safe Frozen Shrimp Meat Products 1. BACKGROUND: To deliver highly relished and supersafe prawns to the consumer, rapid freezing after processing and storage at low temperatures is essential for prawn and prawn products in order to eliminate oxidation, denaturation of proteins, sublimation and recrystallization of ice crystals. Temperature increase of frozen product will result in off-flavors, rancidity, dehydration, weight loss, and loss of juiciness, drip loss, toughening, microbial spoilage and autolysis of the product. Therefore, it is absolutely critical that frozen conditions are maintained during transportation, storage, and in retail stores. This needs to be verifiably demonstrated to the consumer during the time of purchase. This is feasible only by a bio-sensor which will demonstrate the actual state of the product during its shelf-life. 2. PROBLEM DESCRIPTION: Prawns may be frozen–thawed many times before being consumed. The Frozen prawns may get thawed (core temperature ~ 0 deg C) and refrozen during transportation and repackaging. An increase in the freeze–thaw cycles, greater than -180C, results in augmenting Thiobarbituric acid (TBA) value and cutting force while lowering the salt soluble protein (SSP) value. This leads significant deterioration in product quality. The prawns can be freeze–thawed only up to 2 cycles. In addition, the product will be spoiled if there is a slow re-freezing time which steeply increases the bacterial count in the prawns. Therefore, it is important demonstrate the temperature fluctuations and actual state of the monitored packed frozen meat to the consumer illustrating the product quality and safety. 3. PROBLEM STATEMENT: To build a low-cost Time Temperature visual biosensors which will change it basic characteristics, such as color, and ensure ongoing communication with shoppers. This should result in maximizing freshness, minimize waste, and augment the brand value of frozen shrimp products. 4. PROJECT DELIVERABLES (a) To develop a time series data logger which will be both visual and machine readable. It should be user friendly, can be calibrated to suit products with varying shelf-life, and compatible with existing other machine-logging technologies (b) Desired protypes (For Testing): The built prototype should be accurate, precise, and reproducible in temperature monitoring, especially with increasing temperature from – 18 deg. C., to ambient condition. Changes in characteristics, such as color (or) chemical properties, should be faster with increasing temperature and preferably capture the entire shelf-life. Integration of technology using existing raw materials. process, and products, such as paper and films, and printing will be added advantage -------------------------------- |
| You tube Link | <https://www.youtube.com/watch?v=hbFlYb2crso> |

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| Project No. | 45 |
| Company type | Industry Personnel |
| Organization | AICHAPPRAISERS AUCTIONERS |
| Problem statement title | App Based Valuation Reports of Mobile Assets |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | We want to automate through mobile app our valuation reports containing photographs with digital signature eliminating hard copies. Our system is semi automatic and currently we are providing PDF links. Right from the site to the final point we wish to completely automate inspection process. The reports was containing algorithms to cost to the bidder. a link of the same is given here http://aichappraisers.com/valuationreports/SEP 2018/WB/5001786612.pdf |
| You tube Link | <https://www.youtube.com/watch?v=XojReovnzes&list=LLm51RuYwWBRBLM2A9btjpyg> |

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| Project No. | 46 |
| Company type |  |
| Organization | MindTree |
| Problem statement title | Drone based medical facility |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | Use drones to deliver critical medicines ,blood, blood derivatives to rural health centers in India. There would be some centralized distribution centers from where the drones will be launched and retrived. The drones should autonomously perform the delivery and return back to the base. |
| You tube Link | <https://www.youtube.com/watch?v=9K0FX2tDfv4&featur> |

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| Project No. | 47 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Identity (KYC) secure sharing |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Frequent cases of personal data leakage has brought back into focus the security issues with different KYC programs. A consumer is expected to provide his personal identity for authentication by different agencies, which is known as KYC, but there is no restriction on how much data to be shared with the agencies needing the KYC. Consumer should have full control over where and how much data is being used by the third parties. We can use a public Blockchain based solution to overcome all these. |
| You tube Link | <https://www.youtube.com/watch?v=A5DeMlF6zU8&featur> |

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| Project No. | 48 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Proactive Disaster Detection |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Detect high probability of large scale natural disasters and eventually model the post disaster spread dynamics. One approach could be to use technology to process the satellite data to predict the likelihood of the disaster which then can be used as a warning tool for monitoring and detecting the disaster. Also, with the satellite and human generated data, system should model the dynamics of the disaster spread, which will help to manage the disaster efficiently. |
| You tube Link | <https://www.youtube.com/watch?v=wvS5xFcKVVk> |

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| Project No. | 49 |
| Company type | Industry Personnel |
| Organization | MindTree |
| Problem statement title | Driver alertness detection |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | A lot of deaths happening are because of road accidents. So to prevent these accidents, a driver alertness detection system must be made. |
| You tube Link | <https://www.youtube.com/watch?v=r39Uo2LnV90&featur> |

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| Project No. | 50 |
| Company type | Industry Personnel |
| Organization | CDK Global (India)Pvt Ltd |
| Problem statement title | Hospital Finder |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. Hospital Finder will solve this problem by allowing people to search for nearby hospitals on the basis of medical treatment, specialist doctors, medicine/blood availability, etc. |
| You tube Link | <https://www.youtube.com/watch?v=Qf8nyCKtsHc> |

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| Project No. | 51 |
| Company type | Industry Personnel |
| Organization | KISAN FORUM PVT LTD |
| Problem statement title | Smart Farm Diary |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Many farmers do not keep account of their expenses. They do not keep a note of expenditure on seed, fertilizer, pesticides, labour, machinery charges, electricity bills etc. If maintained properly, this information can help farmers take many decisions like cutting out unnecessary expenses. If accompanied by various finance options, the smart farm diary can be a very useful tool for farmers. |
| You tube Link | <https://www.youtube.com/watch?v=4vT9aoqMJWk&featur> |

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| Project No. | 52 |
| Company type | Industry Personnel |
| Organization | KISAN FORUM PVT LTD |
| Problem statement title | Farm input calculation |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | The application of fertilizers and pesticides depends on the soil type, area, crop, pest infestation etc. Most of the farmers do not know the right fertilizer/pesticide to be applied and its correct amount. They end up over-applying the inputs thus causing crop damage, water and soil pollution, high pesticide residue in food. A mobile application which can identify the correct fertilizer/pesticide and calculate the correct amount to be applied can help farmers overcome this issue. |
| You tube Link | <https://www.youtube.com/watch?v=Y7WSkwc9zkg&featur> |

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| Project No. | 53 |
| Company type | Industry Personnel |
| Organization | KISAN FORUM PVT LTD |
| Problem statement title | Aggregation |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | The major reason behind farmers being economically challenged is that they do not get the right market price for their produce. Also, the price they pay for inputs considerably higher than the cost at which the inputs are manufactured. There is no application or service in the market which can help farmers come together and buy inputs in a group directly from manufacturers. Or there is no way farmers can form a group and sell their farm produce to FMCGs or other big buyers. An app will help. |
| You tube Link | <https://www.youtube.com/watch?v=xN73z1Xoo7o> |

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| Project No. | 54 |
| Company type |  |
| Organization | SKF India Ltd. |
| Problem statement title | Developing Low Noise High Speed Ring Loading Sys |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | The Face & OD Centerless grinders for Bearing Rings with asymmetric cross section requires rings to be fed in the m/c in right orientation at high speed (ring OD size ~ 30 mm - 180 mm, width ~ 12mm - 60 mm). Conventional mechanical loaders have limitations, there are frequent interruptions during loading & rings get stuck. Whole system is very noisy & requires constant human intervention which is unsafe. A solution is required for feeding rings into m/c's at required speed and right orientation |
| You tube Link | <https://www.youtube.com/watch?v=_nQRVjWqoPk> |

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| Project No. | 55 |
| Company type |  |
| Organization | SKF India Ltd. |
| Problem statement title | Automated Visual Inspection of Oily Components |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | The Bearings Rings & assembled Bearings need to be free from visual defects such as Surface Defects, Nicks, Dents, Black Patches, Uncleaned or Un-honed Surfaces, Laser Marking Missing, Character or faint marking etc. This needs to be prevented from being passed on. An automated visual inspection sys is required to detect these defects under actual production environment & oily conditions. Robot system with correct algorithms & intelligence built-in(for self-learning) also need to be built in. |
| You tube Link | <https://www.youtube.com/watch?v=jhQ7nRLNDfY> |

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| Project No. | 56 |
| Company type |  |
| Organization | Mahindra&Mahindra(FarmEQ) |
| Problem statement title | Pedestrian Safety Device in automobiles |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Pedestrian death rates are amongst the highest in India as Jaywalking is very common. There is no system integrated with vehicles to detect and prevent this. All safety features currently focus on the occupants of the vehicle. Availability of such a driver assistance system would significantly take down instances of fatal accidents involving pedestrians. It would identify when a jaywalker/bystander moves in the path of the vehicle and instantly deploy measures to evade or brake. |
| You tube Link | <https://www.youtube.com/watch?v=_UOHwpQwMQE> |

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| Project No. | 57 |
| Company type |  |
| Organization | Mahindra&Mahindra(FarmEQ) |
| Problem statement title | Parking Spot indicator in vicinity |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | India is the world’s fourth largest automobile market with limited parking spots. Ever-growing number of vehicles causes traffic congestion on most streets and roads. Availability of a low cost connected ecosystem will help identify the nearest parking spot when sought. This will resolve issues related to parking as well as reduce traffic jam instances caused due to improper parking situations. |
| You tube Link | <https://www.youtube.com/watch?v=-5k45dmKhzg> |

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| Project No. | 58 |
| Company type | Industry Personnel |
| Organization | Mahindra&Mahindra(FarmEQ) |
| Problem statement title | Low Cost Digisense Platform: Change Driving Habits |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | We have very erratic driving patterns on the road and it causes lot of fuel wastage and is a major cause of accidents. A low cost system(under 15$) which can integrate with any car and provide a summary of driving habits of each car owner/driver will help us track usage, plan routes and monitor the health of the vehicle real-time. We can then suggest users to modify their driving habits to control spending on fuel, breakdown alerts and to practice proper road etiquette. |
| You tube Link | <https://www.youtube.com/watch?v=sDk9Pn49vgc> |

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| Project No. | 59 |
| Company type | Industry Personnel |
| Organization | RCF |
| Problem statement title | AI Solution for Farmers |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | Food Security is paramount importance to the growing food needs of an ever increasing population. Not having sufficient domestic production of food to meet requirement of 1.25 billion plus and still expanding will put huge burden on Indian economy. India is a large agricultural hub around the globe and majority of the total population is dependent on the agricultural sector for meeting their demand. Agriculture is the major end-user sector for fertilizers and the demand for fertilizer is growing significantly. Due to unpredictable monsoon and ever decreasing ground water and un predictable market condition and unregulated market for crop yields putting huge pressure on farmers. A solution to be developed taking into account following factors 1. Monsoon Prediction 2. Climate conditions 3. Soil condition 4. pests and disease Predictions and use of insecticides 5. Demand for crop 6. Availability of fertilizers and insecticides 7. Irrigated and non-irrigated Based on available data from multiple sources and market condition, a solution in the form of interactive application is expected from the cream of the society to guide farmers in deciding when and which crop to grow in their fields based on geographical location of their field and market demand / trends using artificial intelligence (AI). In addition to the above the application should propose the type of fertilizers to be used with doses of fertilizers with timeline/Schedule. The information should be provided in national & local languages. |
| You tube Link | <https://www.youtube.com/watch?v=C5sOH6oa7Jo&featur> |

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| Project No. | 60 |
| Company type | Industry Personnel |
| Organization | RCF |
| Problem statement title | Integrated Crop protection Management |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | AI solution for Integrated Crop protection Management In today’s scenario, the climatic conditions have become uncertain with unpredictable monsoon, the farmers work hard in the field and grow good crops for the entire nation and suddenly they are struck with bad luck and pest attacks their crop may because of un expected change in climatic condition. Relationship between some of the Agro climatic conditions like fog, humidity, temperature sunlight, rainfall, variation in minimum and maximum temperature |
| You tube Link | <https://www.youtube.com/watch?v=xeGQD053-WQ&featur> |

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| Project No. | 61 |
| Company type | Industry Personnel |
| Organization | MAHYCO |
| Problem statement title | Crowd sourcing of diseases and pests information |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Indian farmers rely on each other for guidance on the type of seeds to use, diagnosis of pests and diseases as well as their remedies. Timely assessment of problems on the field can improve yields and therefore incomes for the smallest of farmers.The solution envisages using the “wisdom of the crowds”- the creation of a crowd-sourced database which is created for the farmers by the farmers. In the ideal situation farmers will be able to login to see information that other farmers have inputted. |
| You tube Link | <https://www.youtube.com/watch?v=wJyWm87KRVk&featur> |

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| Project No. | 62 |
| Company type | Industry Personnel |
| Organization | MAHYCO |
| Problem statement title | Farm to Fork traceability of Farm Produce |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Today, there is a total lack of information on where our food is coming from, who is growing it and what is being applied to it. A farm to fork traceability system can help eliminate the complete lack of transparency that exists starting with the creation of a farmer id and profile, farm record that will contain what chemicals and fertilisers he has used in addition to location details and sale details of every transaction. This will help diagnose the root cause of farm related problems. |
| You tube Link | <https://www.youtube.com/watch?v=wJyWm87KRVk&featur> |

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| Project No. | 63 |
| Company type | Industry Personnel |
| Organization | Hero Electric Vehicles |
| Problem statement title | Parallel BMS |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | Conventional Lithium –ion battery packs of 1 to 3 KWhr are connected in parallel and series of cells to achieve 48 V required for e-scooter and e-rickshaws. This limits the number of cells to be used and leads to costly Battery management system. A few weak cells reduce the performance of the full battery pack. Participants to develop a new concept of which will integrate boost convertor from 3.7 V to 48 V rated voltage and also integrate motor controller function. |
| You tube Link | <https://www.youtube.com/watch?v=P4dR5SXemxY&featur> |

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| Project No. | 64 |
| Company type | Industry Personnel |
| Organization | Hero Electric Vehicles |
| Problem statement title | Mobile App for Rental Battery |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | This requires advance BMS development for locking and unlocking the Lithium ion battery BMS on basis of monthly payment by customer. The battery operating vital parameters to be stored in cloud for later retrieval during maintenance. Participant to develop logic and the embedded system for battery capacity from 1 to 3 KWhr purchase on lease instead of one time investment in lithium battery. This will promote E-mobility solutions over conventional fuel scooters. |
| You tube Link | <https://www.youtube.com/watch?v=Bd5TUwid5gE&featur> |

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| Project No. | 65 |
| Company type | Industry Personnel |
| Organization | Hero Electric Vehicles |
| Problem statement title | Power Train Optimization |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | BLDC motor know for high power density design and high efficiency. As the speed of the vehicle increases the motor becomes inefficient due to increase in losses. Scooter motor is in range of 500 to 3000W for 25 to 60 kmph speed application. Participant to derive at most efficient combination of motor sizes, hub motor versus transmission driven off hub motors for improved torque-speed characteristics, arrive at controller design for cater low and high vehicle speeds. This involves motor design s |
| You tube Link | <https://www.youtube.com/watch?v=yJB_L0wWr40&featur> |

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| Project No. | 66 |
| Company type | Industry Personnel |
| Organization | MAHYCO |
| Problem statement title | Reducing Cotton Picking Cost of Indian Farmer |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Cotton picking is completely manual in India. Because of increasing labour costs, cost of picking cotton has increased substantially. It is about 40-50% of total crop management cost and accounts for 15 to 20% of gross income.Mechanised picking is cost effective & better than hand-picking since the latter can lead to contamination.What we want is a Small machine that can pick minimum 150-200 Kg cotton per day from cotton plants. |
| You tube Link | <https://www.youtube.com/watch?v=XMSnaJiZ8nI&featur> |

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| Project No. | 67 |
| Company type | Industry Personnel |
| Organization | MathWorks India Pvt Ltd |
| Problem statement title | Aerial Traffic Monitoring using UAVs |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | INTRODUCTION India is a country with the second largest road network in the world. Out of the total stretch of 5.4 million km of road network, almost 97,991 km is covered by national highways. Challenges in traffic management and congestion cause huge financial, environmental, and physiological costs to the individual and to the government. On an average, a person spends anywhere between 30 minutes to 2 hours of their day commuting, accounting to almost 520 hours a year. It is estimated that the traffic congestion in the four metro cities costs the nation approximately Rs. 1.5 lakh crore (more than the annual Railway budget for this year) {Reference:1,2}. This problem statement focuses on developing a specialized aerial solution for automatic aerial analysis of traffic activity in highways and city roads using Unmanned aerial vehicles. The end goal is to explore new possibilities in the field of traffic analysis by its fully automatic calculation of a wide range of traffic parameters such as speed, densities, time, and pollution levels. These data can be used for: o Betterment of road condition: Detecting potholes and inefficient speed breakers o Detecting traffic anomalies: Identifying root cause of traffic and other emergencies o Toll-gate efficiency: Prevent choking of traffic at toll gates o Maintain strict traffic regulations: Identifying traffic violations o Aid in controlling city pollution levels: detecting and publishing noise and air pollution levels Aerial Monitoring using drones overcome the limitations of traditional methods of traffic data collection due to its mobility, complexity, and ability to cover large areas. Airborne sensors (GPS, FPV cameras, gas sensors etc.) provide sufficient amount of data to enable vehicle location and movement monitoring. MathWorks tools like the Image Processing, Computer Vision System, Statistics and Machine Learning, Mapping Toolboxes and Hardware Support Packages for drones open door to a variety of applications in these areas {Reference:3-5}. MATHWORKS SOFTWARE AND TOOL KITS: MATLAB R2018b or earlier versions [although some products may have been transitioned (Neural Network Toolbox -> Deep Learning Toolbox)] MATLAB, Simulink, Computer Vision System Toolbox, Image Processing Toolbox, Signal Processing Toolbox, Statistics and Machine Learning Toolbox, Deep Learning Toolbox (A comprehensive solution would involve aspects of hardware (drones, IOT), software (vision) and communication (RF) capabilities to work together. From the purpose of feasibility of execution as a Hackathon, we could focus on the software part of the solution.) FREE MATLAB TRIAL: Get started now with your FREE trial https://in.mathworks.com/campaigns/products/trials.html REFERENCES: 1] https://www.financialexpress.com/economy/traffic-jam-in-4-metros-costs-more-than-entire-rail-budget-this-city-has-worst-peak-hour-congestion/1146356/ [2] http://www.newindianexpress.com/cities/bengaluru/2018/apr/19/traffic-congestion-costs-bengaluru-rs-38000-crore-annually-1803533.html [3] https://www.mathworks.com/help/images/detecting-cars-in-a-video-of-traffic.html [4] https://www.mathworks.com/help/thingspeak/Use-Area-Plot-to-Compare-Traffic-Data-Sets.html [5] https://www.mathworks.com/matlabcentral/fileexchange/20287-vehicle-traffic-patterns-at-an-intersection-simevents CATEGORY: Hardware + Software TECHNOLOGY BUCKET: Software – Image processing, computer vision, deep learning |
| You tube Link | <https://www.youtube.com/watch?v=LnwuFC_uWP8> |

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| Project No. | 68 |
| Company type | Industry Personnel |
| Organization | MathWorks India Pvt Ltd |
| Problem statement title | Health alerts application for a region |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | INTRODUCTION: Viral and mosquito borne diseases rise seasonally and regionally. Hygiene is one of the reasons why some regions in India have higher disease rate compared to others. It would be great if an application could collect data, analyze and report to authorities. Here is a problem statement for one such application. PROBLEM STATEMENT: Create a smart phone application that can be used by individuals as well as various medical clinic authorities in each region to report viral and mosquito borne cases registered per day. The application interface can be as simple as type of viral infection reported or optionally collect all the symptoms reported. Location data can be obtained from smart phone and the data can then be sent to MATLAB ThingSpeak channel. Using MATLAB, we can analyze the data reported and create reports that can be sent to regional municipal authorities for necessary actions or posted to the same app where users can view health alerts for their area. USES OF APPLICATION: Applications like this can help in collecting the health information in a region and provide this to NGOs and Government authorities to take necessary steps. For example, an action may be taken to sanitize an area if necessary or send a team of doctors for a camp in the area that reported large number of cases. Expectation is for problem solvers to create an external mobile app that can accessed by anybody and connect it to send data to ThingSpeak WebService, Analyze and send alerts from ThingSpeak WebService to external App again. Display the charts that ThingSpeak WebService provides. For more information, please check the below link… https://www.mathworks.com/help/thingspeak/getting-started-with-thingspeak.html MATHWORKS SOFTWARE AND TOOL KITS: ThingSpeak Free WebService for collecting the data, analyzing and acting on it. It seems to provide few additional toolboxes as AddOns { https://in.mathworks.com/help/thingspeak/matlab-toolbox-access.html }. It depends on kind of visualization and analysis problem solvers will do on data. It may be useful to ensure licensing for tool boxes listed in AddOns is given. For version, it may be useful to provide latest available version. FREE SIGNUP FOR THINGSPEAK: Free accounts offer a fully functional experience on ThingSpeak https://thingspeak.com/users/sign\_up REFERENCES: [1] https://thingspeak.com/ [2] https://in.mathworks.com/products/thingspeak.html [3] https://in.mathworks.com/help/thingspeak/getting-started-with-thingspeak.html [4] https://in.mathworks.com/hardware-support/thingspeak.html [5] https://in.mathworks.com/help/thingspeak/ CATEGORY: Software TECHNOLOGY BUCKET: Software – Healthcare |
| You tube Link | <https://www.youtube.com/watch?v=x00_XwhmoAw> |

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| Project No. | 69 |
| Company type | Industry Personnel |
| Organization | Thermo Fisher |
| Problem statement title | Integrated Health Care App/Portal |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complicated |
| Description | Develop the concept of an integrated Health Care portal with App that helps common man to look for a hospital or a doctor for any consultation needs or undergoing medical procedure. A platform that offers service providers approved for offering diagnostic tests at regulated price and quality. This portal could be linked to IRDA approved healthcare insurance companies with clear mention of what is included and what is not, Deductibles, etc. |
| You tube Link | <https://www.youtube.com/watch?v=4CjWDnDVt0Q&featur> |

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| Project No. | 70 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Alternative to traditional credential based authentication |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | On day to basis people access various websites like net banking, trading, social websites, Govt websites etc.. and each site has unique login id & password. This has become unmanageable, it is not possible to remember login id & password of each site and it is not safe to write it down. We need a solution like universal authentication system (e.g. Aadhar) which is secure and manageable.  The challenge with the centralized system like Aadhar are regulation, dependency and cost. Hence the system should be decentralized, secure and cost effective. It can make use of technologies like bio-metrics,  face recognition, OTP etc.. |
| You tube Link | <https://www.youtube.com/watch?v=phmF_X2Ju-s&featur> |

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| Project No. | 71 |
| Company type | Industry Personnel |
| Organization | Dalmia Cement |
| Problem statement title | Voice/Textual BOT mobile app |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Develop a generic BOT mobile App (Android and ios) that can be used for voice/textual chat interactions with various stake holders in a structured and/or unstructured manner. E.g. structured – what is my order status? – BOT would respond with the current order status by fetching the same from back end Database. E.g Unstructured – status - BOT would respond with order status, delivery status, payment status, etc. from back end Database. Architecture should be open enough to be used with multiple |
| You tube Link | <https://www.youtube.com/watch?v=XEgTYSs98Ys&featur> |

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| Project No. | 72 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Customer Support Chat bot with ML |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | A chat bot which can interpret the customer complaints or queries, search the DB for resolution and in case new solution found, hand it over to support staff. Based on the conversation b/w customer and staff, update the DB, be prepared to handle similar queries in future. |
| You tube Link | <https://www.youtube.com/watch?v=AxyMto2R-c0&featur> |

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| Project No. | 73 |
| Company type | Industry Personnel |
| Organization | Manipal Health Enterprise |
| Problem statement title | Doctor App |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | A mobile app for helping doctors plan their appointments, out patient & in patient care, handover of patients in case of leaves for seamless continuity of care |
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| Project No. | 74 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Customer support-Automation of ticket creation(RPA |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Description: Eliminate manual intervention in ticket creation 1. Raise a ticket based on the complaint mail  2. If the details are incomplete (e.g. customer id is missing), send a mail to customer asking for missing details. 3. Link the sub sequent responses from the customer to the original ticket 4. Recognize the bounced mails and initiate appropriate action 5. Auto response to template based mails (complaints/queries) ie no free text 6. Multiple bots / parallel processing |
| You tube Link | <https://www.youtube.com/watch?v=o6wCUvEMNT4&featur> |

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| Project No. | 75 |
| Company type | Industry Personnel |
| Organization | Manipal Health Enterprise |
| Problem statement title | Cost effective parking solution |
| Category | Software |
| Technology Bucket | Smart Cities |
| Complexity | Complicated |
| Description | A cost effective parking solution to address the problems faced by patients/attendants. The solution that we are looking is from a space optimization angle. There is a parking area with limited space. Once a vehicle enters, the system should be able to calculate its space requirement for parking and put it in a location to get optimal usage. |
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| Project No. | 76 |
| Company type | Industry Personnel |
| Organization | Vanderlande |
| Problem statement title | Telepicking Interface with item picking Robotics |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | Most distribution centers (warehouses) uses a good-to–person picking model and automated system to compile orders. A latest available technology component to be used to Interface with robotic item picking and operator. Remote operation by operator of these robotic item picking using the control devices like joystick, remote hand. The operator should be able to visualize this process by camera |
| You tube Link | <https://www.youtube.com/watch?v=NeYjq5gYTNA> |

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| Project No. | 77 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Google search Using (RPA) |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | When we search for a particular information in Google the result is not ready for consumption and not well formatted. It requires some more effort and time to drill down each link and find out the relevant information. This process needs to automated and results needs to be collated in a table or an excel so that it is easy to consume. When we search a online directory like Just dial, the information is provided in a tabular format & easy to consume. E.g. Chinese Restaurants in Coimbatore |
| You tube Link | <https://www.youtube.com/watch?v=s_zUdINFC_c&featur> |

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| Project No. | 78 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Google search Using (RPA) |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | When we search for a particular information in Google the result is not ready for consumption and not well formatted. It requires some more effort and time to drill down each link and find out the relevant information. This process needs to automated and results needs to be collated in a table or an excel so that it is easy to consume. When we search a online directory like Just dial, the information is provided in a tabular format & easy to consume. E.g. Chinese Restaurants in Coimbatore |
| You tube Link | <https://www.youtube.com/watch?v=s_zUdINFC_c&featur> |

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| Project No. | 79 |
| Company type | Industry Personnel |
| Organization | KG Info Systems Pvt Ltd |
| Problem statement title | Time and productivity analysis |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | A tool to capture & calculate the time spent by a resource in various activities ie documentation, coding, SQL, Internet etc..  and store it in a central DB and generate analytics based on this. This is to understand where the resources are spending more time and where organization is loosing time & how to make resources more productive. |
| You tube Link | <https://www.youtube.com/watch?v=AhjrECLTzoA&featur> |

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| Project No. | 80 |
| Company type | Industry Personnel |
| Organization | Vanderlande |
| Problem statement title | Using AI to improve slotting, picking routes |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | In the future it is expected that robots can do the same activities as the operators in a traditional warehouse. So, one could have a warehouse where both robots and operators are responsible for replenishment and picking tasks. The assignment is to make a system where we can learn from the operators in the WH (how is the slotting and picking routes operator uses). The idea is to use artificial intelligence, that learns from operators, to develop a strategy which will be used to instruct Robots |
| You tube Link | <https://www.youtube.com/watch?time_continue=6&v=nF> |

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| Project No. | 81 |
| Company type | Industry Personnel |
| Organization | NALCO |
| Problem statement title | Finished Goods DISPATCH BAY Mnagement Automation |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Environment- We have 4-5 Dispatch Storage Area (DSA) of 100 mtr by 50 mtr, aprox 500-2000mtrs away from each other. From the Production Bay (PB) the Finished Goods (FG) are transferred to DSA. Each FG has usable parameters viz. an Identification Number (UID), Quality Indicators (QINDs) and Weight (WTG). The FGs are arranged in DSA with help of Fork Lifts in a defined and orderly manner in specified zones. The DSA is demarcated into physical smaller grids/zones of 5 X 5 mtr in a physical manner with markers placed on the periphery of DSA. n.b. – Each FG weighs approx. 980kg +/- 0-30kg. Each TRUCK is to be loaded with approx. 9-10T of FG as per LS. Operation- A. From the PB area the FGs are shifted by the Operator to DSA and are arranged at specific physical Grid Locations with help of Fork Lifts. B. At the day end, Dispatch Plan is prepared for next day and truck placement request is sent to FG picker and Transporter. C. The Picker identifies the require material at DSA as per the Dispatch plan. D. The truck enters the plant and tare weight (TW) is recorded, QIND, Total Quantity to be Dispatched (TQTY), Truck Number (TN) is recorded on the Loading Slip (LS) before being directed to DSA. E. With given LS (UID, TN, QIND and TQTY) the Fork Lift operator locate, reach, pick and loads the material identified by picker on to the truck. F. The Loading Slip (LS) is completed recording specific FG UIDs and the truck moves towards the weighbridge for final weighment and then proceeds to the DISPATCH section for billing. Problem- Placement of FG in the specified ZONE in DSA while receiving from PB is very difficult ….. During shifting of FGs from PB to DSA, the physical storage Location is not digitally linked on Database to the UID of FG causing problem locating in a later time while tracing for loading on to a truck. Locating the FG in DSA leading to higher TURN AROUND time ….. At times due to some local problem of space, non-adherence to set procedure, unloading from a Consigner Truck, rearrangement of FGs within DSA, etc. the FG gets mis-located within the DSA and are difficult to locate, reach, pick and load the FG in a timely and efficient manner while loading the consigner truck. Manual LS preparation and multiple point of data entry …… The Loading Slip (LS) details are recorded on a paper and sent to Invoicing team for processing. Defining a proper zone and storage of FG for ease of accessibility ….. Improvements Desired- To devise a procedure that is automated, smart and intelligent to bring in Quicker turn-around time of Truck Loading a. Assistance to the process of Shifting FGs to DSA from PB b. Tag the FG with GRID Identity to facilitate the Dispatch Process c. Suggest Fork Lift Operator the next FG to pick d. Option with Fork Lift Operator to look out for an alternate FG e. Provide/Display a FG map overlaying the GRID of DSA |
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| Project No. | 82 |
| Company type | Industry Personnel |
| Organization | Maruti Suzuki India Ltd. |
| Problem statement title | On the spot (Realtime) Accident information & Insurance dispute resolution |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | '- There should be a system / portal for gathering of on the spot information during road accidents. This information should include photos of the site, interviews with eyewitnesses, information on injuries and fatalities, reason for accident, speed, road condition on relative basis, etc.. - All this data can go into a central database - The responsibility for collecting the data could be given either to police, transport authority, ambulance or even ordinary citizens who volunteer for the same - In the same system, there should also be a provision to submit / exchange Insurance numbers / details in order to settle the dispute if any arising out of accident |
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| Project No. | 83 |
| Company type | Industry Personnel |
| Organization | Maruti Suzuki India Ltd. |
| Problem statement title | Live Digital Traffic Management / Information System using GEO Coordinates |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | '- There should be a system for Traffic policing using GPS and Traffic light / signal system integration & the same should be capable of: - Deciding priorities when emergency vehicles are in the lanes - Adaptive (Red-Green) timings based on traffic in lanes, syncronizing consecutive signals in sequence so as to allow smooth flow of traffic on a particular route - Traffic voilation detection using GPS, Traffic Signal, CCTV's - Extraordinary event recognition like traffic, accident, Protests etc. - Pot holes and speed breaker mapping on maps through satellite imaging thru AI algorithm - Traffic signal location map |
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| Project No. | 84 |
| Company type | Industry Personnel |
| Organization | Maruti Suzuki India Ltd. |
| Problem statement title | Live AQI (Air quality Index) Map like Google traffice map for the use of various stakeholders (Car Drivers,OEMs, individuals etc.) |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | '- The AQI index of City is available, it doesn't inform the pollutant level on different areas & roads of the city - There should be a system for monitoring of AQI for different road levels thru physical measurement & AI and this data should be available on cloud for the use of various stakeholders - Find use cases for such information |
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| Project No. | 85 |
| Company type | Industry Personnel |
| Organization | Maruti Suzuki India Ltd. |
| Problem statement title | Stop Noise pollution from honking |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | 'Indian Roads are very Noisy due to various road users and congestion factors., its a custom in India to paint Truck Rear with message " BLOW HORN". Honking is a habit and people like to install various types of horn to generate discrete audible noise. Horn blowing leads to noise pollution and creates a chaotic environment. Horn is a device to be used in emergency and if it is used repeatedly in very short succession then there should be system having the following features :: - recording the no. of times a horn is pressed by the driver & this should be further linked with driving capability which in turn should be be used to calculate insurance premium / permit charges for taxi, etc.. |
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| Project No. | 86 |
| Company type | Industry Personnel |
| Organization | Maruti Suzuki India Ltd. |
| Problem statement title | Water borne diseases detection in a particular location |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | '- There should be an aggregation app to check & monitor the outbreak of any water borne diseases - It should have capability to mark on app - the location of the detected case (making mandatory for test lab) - This data should be available on cloud & the same can be used by various agencies to take corrective action - Similar app can be used for various other diseases like dengue, malaria, jaundice, tuberculosis etc... |
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| Project No. | 87 |
| Company type | Industry Personnel |
| Organization | NCR |
| Problem statement title | Ensuring effective detection of currency counterfeits across different touch points |
| Category | Software |
| Technology Bucket | Finance |
| Complexity | Complex |
| Description | Currently, currency notes that are in legal tender are used widely in the economy for different transactions and are accepted at various banking touchpoints like branches, ATMs, banking correspondents etc. as well as commerce touchpoints like retail stores, petrol bunks and for various utility/government services. Some touchpoints are more mature at detecting and eliminating counterfeit notes like note counters in branches and note accepting ATMs, but in a wide array of touchpoints cash handling is manual. If simple software that can be downloaded on a phone can detect counterfeit notes that have been detected at other touchpoints then counterfeit detection can be vastly improved thus reducing the fraud. |
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| Project No. | 88 |
| Company type | Industry Personnel |
| Organization | NCR |
| Problem statement title | Improve reusability of electronic components across various industries by maintaining industry databases of compatible HW, SW version data |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Currently, the repairs of electronic equipment like phones, refrigerators, TVs etc. is supported by specialized agencies only and general-purpose repair facilities aren’t able to use a wide array of parts available from scrapping of old equipment. If data visualization software can be made available by an industry body to which all participating electronics manufactures can make required data that allows for identifying a part along with compatible hardware/ firmware then this can be used by general-purpose repair agencies and will result in improved re-use of scrapped electronic equipment. For example a common Platform/appln can be developed where technical specifications of components can be shared to make it more usable. We can have facility to upload image and identify components thru them. |
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| Project No. | 89 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | CO2 conversion to CO |
| Category | Hardwar |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | CO2 is a thermodynamically very stable molecule and does not react easily. If CO2 can be reduced to CO in an energy-efficient manner, CO can be further converted to various chemicals using syn-gas chemistry. Hence, various approaches for CO2 reduction such as electro-catalytic reduction, efficient thermal reduction, reverse water gas shift reaction, etc., can be developed. |
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| Project No. | 90 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Lignin valorisation- Conversion to fuels,chemicals |
| Category | Hardwar |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Lignin valorisation: Conversion into fuels, chemicals and materials - Production of second generation (2G) ethanol from agricultural residue would generate large quantities of lignin as a byproduct. Lignin is a heterogeneous aromatic polymer and it is very difficult to depolymerise and upgrade into fuels or chemicals. At present, most of the lignin generated is burned to meet process heat requirements. Converting lignin into bio-based chemicals and polymers can help improve the economics of cellulosic ethanol plants. Lignin can be converted into valuable bio-polymers, chemicals and fuels through thermo-chemical and biological methods. |
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| Project No. | 91 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Design of proto-type Hydrogen storage tank |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Design of proto-type Hydrogen storage tank with adsorbent/hydride and demonstration in a vehicle - Hydrogen has drawn attention as a next-generation energy carrier for mobile and stationery power sources. For transport needs, Hydrogen is mostly stored in a compressed from (at 350-700 bars) while methods for its storage at lower pressures are rapidly developing using adsorption-based Hydrogen storage (AHS) systems. Abundant adsorbents such as activated carbons, carbon fibers, carbon nanotubes, carbon nanohorns, fullerenes, zeolites, and metal-organic frameworks (MOFs), covalent organic frameworks (COFs) have been explored as adsorbents for Hydrogen. A Hydrogen storage system based on AHS can provide a safe alternative for on-board hydrogen storage. |
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| Project No. | 92 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | High-thermal efficiency gas burner |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Liquefied Petroleum Gas (LPG) is extensively used in domestic as well as industrial cooking. It is a precious and non-renewable energy source. Therefore, it is highly essential to use it efficiently by employing energy-efficient devices. With the objective of conserving LPG fuel, IndianOil is looking for design and development of energy-efficient devices for domestic & industrial cooking that surpass the thermal efficiencies of devices available in the market. |
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| Project No. | 93 |
| Company type | Industry Personnel |
| Organization | VMware Software India Pvt |
| Problem statement title | Talking Fingers |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Real time communication with Speech & Hearing Impaired is always a challenge. There are very few interpreters at limited locations. An app which can do real time translation from multiple Indian languages and English to Sign language will help bridge this gap to a large extent. App should run offline without internet.App should be able to feed in words and signs already available in Database. |
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| Project No. | 94 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Low-cost vapour recovery system at fuel stations |
| Category | Complex |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Low-cost efficient vapour recovery system at fuel stations - Evaporative emission of Volatile Organic Compounds (VOC) is of great concern during various stages of handling of transport fuels in the distribution network. Currently, technology for control of VOC is achieved through deployment of VRS system, which is available from a limited number of suppliers. Hence, development of such a system will enable Oil Marketing Companies (OMCs) to control VOC emissions effectively at reduced cost. The various points where the product could have possible application Lorry loading point, Lorry unloading at fuel stations,Vehicle filling by fuel stations (Nozzle design) or any other application, |
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| Project No. | 95 |
| Company type | Industry Personnel |
| Organization | VMware Software India Pvt |
| Problem statement title | Re-forestation using "self driven" robotic vehicle |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | We have vast areas of land with no forest cover, growing trees on this is tedious as these lands are remote and need manual labor and logistics. Even when the land is near by (like land belonging to army is usually very close to their camps, but lies vacant with no trees being planted), investing manual labor in this task is difficult.The proposed solution shall plant seeds and water the plants, monitor plant growth and suggest improvements to increase the green cover |
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| Project No. | 96 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Innovative re-refining of used lubricating oils |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Process methods using solvent/acid treatment for re-refining of used lubricating oils available in the market are not eco-friendly solutions for the problem. However, since oil conservation is of immediate importance & used oil disposal in an environment-friendly way is of utmost importance, we are looking for novel concept/idea for re-refining used lubricating oils in an eco-friendly manner, without solvent/acid treatment. |
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| Project No. | 97 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Low-cost production of Hydrogen |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | At present, Hydrogen is produced mostly by reforming fossil fuel sources – petroleum feedstocks – which is a cost-intensive process and defeats the very purpose of conserving scarce petroleum reserves. Production of Hydrogen through renewable route will reduce dependency on petroleum feedstocks and may also reduce production costs. |
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| Project No. | 98 |
| Company type | Industry Personnel |
| Organization | VMware Software India Pvt |
| Problem statement title | Smart eco-friendly garbage management |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complex |
| Description | Trash management is a one of the hard problems. . The existing model is very ineffective due to its poor placement, collection scheduling, dump yard allocation and management, ever increasing transport cost and resulting health issues. The solution shall present a solar powered smart garbage bin (like an Edge in IoT) which houses necessary biotech based mini/macro waste decomposer and necessary mechanical and electronics to manage, monitor and secure the Smart bins & detect usage violation etc |
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| Project No. | 99 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Low-cost, high-accuracy lubricant testing kit |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | The existing lube testing equipment is very costly & can't be deployed in field. There is need for an effective methodology & toolkit for monitoring conditions of lube during its use in field. Such lube test kits will provide a quick assessment of lubricant quality & will help in controlling associated machinery failure. The proposed kit should aim at at least giving accurate information of used oils with respect to viscosity,total base number, total acid number & moisture content |
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| Project No. | 100 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Utilisation of CO2 emitted from MEG plant |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Around 7-12 metric tonnes/hour of Carbondioxide (CO2) with 99.72% purity (dry basis) is generated from the Mono Ethylene Glycol (MEG) plant and the same is vented into the atmosphere. IndianOil is looking for innovative & novel concept/idea for converting CO2 to valuable product(s) to reduce environmental impact. |
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| Project No. | 101 |
| Company type | Industry Personnel |
| Organization | Indian Oil |
| Problem statement title | Plug b/w petroleum products to avoid intermixing |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Innovative plug between petroleum products to avoid inter-mixing during transportation through multi-product pipelines Petroleum products are generally pumped in batches through a single multi-product pipeline. To ensure meeting product quality requirements, a typical batch sequencing is followed while transporting products through pipeline. A typical batch sequencing is: [Motor Spirit (MS)] – [Pipeline Compatible Kerosene(PCK)] – [High speed Diesel(HSD)] – [PCK] – [Superior Kerosene Oil (SKO)] – [PCK] – [HSD]. During transportation of petroleum products through pipelines, some inter-mixing between products may happen. This mix of products is known as Interface. In the sequence given above, the interface of [MS-PCK] is taken in Motor Spirit (MS), [HSD-PCK] is taken in High Speed Diesel (HSD), [SKO-PCK] is taken in Superior Kerosene Oil (SKO). PCK is the same as SKO but with Sulphur content in line with BS-IV or BS-VI product specifications. With mixing of [MS-PCK] interface in Motor Spirit (MS), some quality degradation happens. An innovative method/procedure for preventing mixing of products (such as inflatable balloons, bio-degradable jelly, etc.), as plugs in between two different products is to be developed. |
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| Project No. | 102 |
| Company type | Industry Personnel |
| Organization | Emcure Pharmaceutical Ltd |
| Problem statement title | 1) Expedite first-in-human clinical trials |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Simple |
| Description | We need to design innovative ways, wherein, the first-in-human (FIH) trials can be expedited. So instead of having multiple phases of clinical trials, there is just one continuous expansion cohort trial. This shouldn’t compromise on the quality of the drug and should include all safety measures to protect patients enrolled in the expansion cohort studies. This process should reduce the development cost and time spent waiting in-between the start and end phases of trials. |
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| Project No. | 103 |
| Company type | Industry Personnel |
| Organization | Emcure Pharmaceutical Ltd |
| Problem statement title | Tracking spurious drugs & ensuring brand safety |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Simple |
| Description | The proliferation of counterfeit drugs is a serious concern for all pharmaceutical companies. We need to implement ways to integrate track and trace solutions in production and supply chain. We should be able to identify such spurious drugs which are deliberately or fraudulently mislabeled with respect to identity/source. |
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| Project No. | 104 |
| Company type | Industry Personnel |
| Organization | Emcure Pharmaceutical Ltd |
| Problem statement title | Predictive analysis of pharmaceutical equipment |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | In manufacturing, it is important to have predictive maintenance of equipment with sensors, tracking operating conditions & performance of machines, factory tooling, predicting breakdowns & malfunctions, taking/recommending preventive actions. Tracking parts inventories and other front-end inputs and monitoring product-quality. The failure/errors in the equipment used in the pharmaceutical industries,may impact the overall quality of the drug. |
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| Project No. | 105 |
| Company type | Industry Personnel |
| Organization | Everest Industries Ltd |
| Problem statement title | Optimum Inventory Control of Machine Spares and Co |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Everest Industries Limited, has 12 manufacturing line. For Plant and Machinery, company maintains Spare Parts and consumables at each plant location. To have an Optimum Inventory (Just in Time) of spares and consumables based on consumption rate/pattern and lead time. |
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| Project No. | 106 |
| Company type | Industry Personnel |
| Organization | Everest Industries Ltd |
| Problem statement title | Automatic Production Planning & Scheduling of Size |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | In order to manufacture products ( size wise, quantity and expected delivery date) as required by the market, company require Makesheet ( Production Plan ) to Schedule and manufacture the products. Company is looking for solution based on market requirement – size-wise product, quantities and expected date of delivery and also the Sheet Machine conditions required to manufacture different size products. |
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| Project No. | 107 |
| Company type | Industry Personnel |
| Organization | Everest Industries Ltd |
| Problem statement title | E-recording of off-cut plates from nesting softwar |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | During manufacturing of built-up I sections, plate nesting software OmniCAD or 2D – Plus is used to nest the virgin raw material plates. After nesting for a particular project, unutilized balance non-standard shape of plate needs to be stored electronically in CAD form to get utilized in future project. Tool is required to store the shapes and archive it during new nesting planning. |
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| Project No. | 108 |
| Company type | Industry Personnel |
| Organization | Everest Industries Ltd |
| Problem statement title | Daily update on construction site progress |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Steel building construction planning and actual on site progress against planning needs to get monitored and analysed on daily basis to identify the risks. Tool is required to update the status of the activities against the planned one on daily basis for effective monitoring of each project. |
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| Project No. | 109 |
| Company type | Industry Personnel |
| Organization | Everest Industries Ltd |
| Problem statement title | Daily update on construction quality assurance at site |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Each steel building construction activity would need critical quality assurance requirement and work needs to be delivered within specified erection tolerances. Tool is required to update the status of the identified critical activity against its actual on-site inspection report for each project on real time basis. |
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| Project No. | 110 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | Smart recording of Hand Washing by Hospital staff |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Practicing hand hygiene is a simple yet effective way to prevent infections. Staffs tend to perform hand hygiene when they are aware, that they are being observed. To track compliance, it is required to design a simple, cost effective, hardware device easily reproducible on a mass scale which will in real time, record the entire process of hand washing. The analytical sensors through its software could capture motion measuring position, direction, and angle of moving objects in 3D space. |
| You tube Link | <https://www.youtube.com/watch?v=egIy1JxvJj8&featur> |

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| Project No. | 111 |
| Company type | Industry Personnel |
| Organization | P. D. Hinduja Hospital & MRC |
| Problem statement title | One Click Research Solution @ Hinduja Hospital (OC |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Since 1987 till date almost 1200+ projects have been processed by our Research Department. At present the files and documents of all the projects are recorded or stored in excel sheets or word documents. Research Administration finds it challenging to handle, supervise, monitor and track the progress of the study in the context of defined timelines as the entire project related data are not linked. We need a digital platform that can link all these documents and send emails. |
| You tube Link | <https://www.youtube.com/watch?v=RHrKQ4lJa7c&featur> |

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| Project No. | 112 |
| Company type | Industry Personnel |
| Organization | P. D. Hinduja Hospital & MRC |
| Problem statement title | Washroom Management for the Hospital |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | We have 4 facilities accommodating OPD, Diagnostics Lab, IPD wards, offices etc. Each floor has multiple washrooms for patients, staff and visitors. The washrooms are cleaned by the Housekeeping staff on a rota basis. Depending on the location, the time of the day etc., a washroom might get dirty much before the next clean-up is scheduled. We need an interactive solution which uses technology to sense if a washroom is dirty, and alerts Housekeeping and captures and analyses data. |
| You tube Link | <https://www.youtube.com/watch?v=XpNIJ4MInUQ&t=7s> |

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| Project No. | 113 |
| Company type | Industry Personnel |
| Organization | P. D. Hinduja Hospital & MRC |
| Problem statement title | Keyword based Exploration of Library Sources |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | DNB students have to complete a dissertation/ thesis on a research topic for which they require library support. The students and their guides face challenges in searching and accessing relevant articles/ papers from the inhouse library. We want a software solution which will offer a platform that will download all the Indian and global references that are relevant to the students’ research topics. |
| You tube Link | <https://www.youtube.com/watch?v=6q2Km_6N8hs&t=13s> |

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| Project No. | 114 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | Handholding Robots for deployment in Apollo Hospital |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | To design, develop and demonstrate the functioning of a reliable cost effective Humanoid Intelligent robot which could be customized, to receive patients in a hospital, take them to various departments and obtain feedback on various services. Machine language processing could be used for in depth, data analysis, self-learning and reinforcement |
| You tube Link | <https://www.youtube.com/watch?v=UMIQxgd9IOs&featur> |

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| Project No. | 115 |
| Company type | Industry Personnel |
| Organization | P. D. Hinduja Hospital & MRC |
| Problem statement title | Analytics of Scanned Prescriptions and Notes |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | The hospital generates a huge amount of medical information about a patient in the form of handwritten medical notes and prescriptions which are scanned and stored as pdf. There is still no way to “read” those scanned documents and extract useful information from them. We need a software solution which can extract useful information from these scanned documents. |
| You tube Link | <https://www.youtube.com/watch?v=2Kj5fsb9c9c&featur> |

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| Project No. | 116 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | Handholding Robots for deployment in Apollo Hospital |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | To design, develop and demonstrate the functioning of a reliable cost effective Humanoid Intelligent robot which could be customized, to receive patients in a hospital, take them to various departments and obtain feedback on various services. Machine language processing could be used for in depth, data analysis, self-learning and reinforcement |
| You tube Link | <https://www.youtube.com/watch?v=UMIQxgd9IOs&featur> |

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| Project No. | 117 |
| Company type | Industry Personnel |
| Organization | P. D. Hinduja Hospital & MRC |
| Problem statement title | Analytics of Scanned Prescriptions and Notes |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | The hospital generates a huge amount of medical information about a patient in the form of handwritten medical notes and prescriptions which are scanned and stored as pdf. There is still no way to “read” those scanned documents and extract useful information from them. We need a software solution which can extract useful information from these scanned documents. |
| You tube Link | <https://www.youtube.com/watch?v=2Kj5fsb9c9c&featur> |

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| Project No. | 118 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | Software for better AV Clarity on Low bandwidth |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | To design, develop and demonstrate the functioning of a reliable, cost effective, high security, platform to facilitate good video conferencing when the bandwidth drops from 140 to 400 kbps from contracted bandwidth is 512 kbps ( 1:1) . This should be reliable at external temperatures of -25C at heights of 14,000 ft |
| You tube Link | <https://www.youtube.com/watch?v=wPXKZ95jqvY&featur> |

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| Project No. | 119 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | Single strip estimation of multiple parameter |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | To design, develop and demonstrate the functioning of a reliable, cost effective, Point of Care Diagnostics devices offering quantitative estimation of parameters tested. Exploring possibilities of redesigning existing test strips so that one strip could evaluate more than one parameter. |
| You tube Link | <https://www.youtube.com/watch?v=oEjUS_xEa_w&featur> |

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| Project No. | 120 |
| Company type | Industry Personnel |
| Organization | Apollo Hospitals |
| Problem statement title | TeleScreening 60 minutes HealthCheck at Work |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Design, develop and prTelescreening- 60 minute health check at work placeoduce a user friendly, multipurpose standalone diagnostic POCD which would provide clinically reliable results for specific pre designed tests including height, weight, BMR, BP, Hb, PCV, HbA1C, urea, creatinine, bilirubin, ECG etc for remote evaluation |
| You tube Link | <https://www.youtube.com/watch?v=XxkHsWGpF0U&featur> |

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| Project No. | 121 |
| Company type | Industry Personnel |
| Organization | Ericsson |
| Problem statement title | Geographical profiling of routes based on security and surveillance |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Simple |
| Description | Security has become an essential aspect of everyday life in India. One of the ways in which we can provide security is by enabling people with vital information on the security aspects for the route they would take during a travel from one place to another. This creates vigilance in traveller and precautionary measures could be taken to prevent any mishap. In this problem, we are envisioning an application that will suspect any possible security lapse in a location enroute to a destination. A user would use a map which will display all possible areas of red-alert for security from the source to destination. Given a route map (like google maps) , the security based profiling of various geographical routes traversed could be highlighted as red/yellow/green indicating high, medium and low risks zones. One would be vigilant while travelling through the high risk zones in the map. The profiling could be done based on history of crimes in the area, presence of people, security guards , presence of surveillance cameras, number of vehicles in the area at the given time. Machine learning could be used to learn the features that contribute to the security of a location. Input: Input would be a data set containing records of crimes in an area along with statistics like number of surveillance cameras, current traffic conditions etc. Output: A map with red, yellow and green patches indicating high, medium and low risk areas given a source to destination path. |
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| Project No. | 122 |
| Company type | Industry Personnel |
| Organization | Ericsson |
| Problem statement title | reducing carbon foot-print by optimizing IoT device usage |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | In today’s world, the usage of IOT devices in day to day life has increased exponentially. Even though the carbon footprint by a single IOT device is negligible, in a public system where there are millions of sensors/radio devices deployed, this creates a considerable carbon footprint in the neighborhood. With huge amount of sensors installed and sending traffic every millisecond, it becomes important to create a smart and dynamic system that will reduce the amount of carbon footprint by utilizing the characteristics of the devices. To optimize the carbon footprint of the IOT devices, we need to come up with an innovative solution to dynamically power on and off the devices without compromising on their functionality. For example, let us assume there exists a system to determine the pollution of a city and thousands of sensors are attached to it. We need to find a method to identify the devices to be turned on or off, reducing the cumulative carbon footprint of the devices fulfilling the functionality i.e. Measurement of pollution level in all locations at a given time. Input: a data set containing latitude-longitude at which sensors are deployed, sensor proximity, carbon-footprint, network topology and other required information Output: a system to determine when and which sensors to be powered on/off dynamically and the total reduction in carbon footprint obtained. |
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| Project No. | 123 |
| Company type | Industry Personnel |
| Organization | Ericsson |
| Problem statement title | Operational maintenance of critical vehicles using AR/VR |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | One of the important aspects of day –to-day life is transportation and there is a huge surge in the number of accidents every year due to improper maintenance or negligence of the vehicle conditions. Human errors during inspections are another major concern. Hence to improve the quality of testing of vehicles, we need to come up with a solution that could detect anomalies in vehicles due to operational negligence. Operational maintenance today are being done based on visual human inspections and manual devices which are prone to errors. We require an Augmented Reality (AR) based application that could improve the quality of testing in vehicles thereby not overlooking the minor displacements. With the usage of AR applications, one should be able to identify and recognize any damage to physical parts of a vehicle which would enable personnel to perform operational maintenance. Image recognition could be used to distinguish between damaged parts with respect the initial state. Input: Input would be a data set containing labelled images of damaged parts in vehicle and new vehicles of the similar make. Output: AR to identify the defective vehicle parts given an image of a vehicle. |
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| Project No. | 124 |
| Company type | Industry Personnel |
| Organization | Infosys |
| Problem statement title | Traffic and accident management |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Traffic & Accident management in India is a complex activity given the number of riders & automobiles we have. Using the existing video feeds that come through the cameras positioned on highways, traffic signal & busy roads, detect the following incidents/events 1) Bike riders who are riding without helmets 2) Count of vehicles that are passing through a signal/road at any given point in time. It should allow report generation on various parameters. 3) Ability to read vehicle no & track & search |
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| Project No. | 125 |
| Company type | Industry Personnel |
| Organization | Infosys |
| Problem statement title | Building Inspection & Monitoring |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Robotics & Drones |
| Description | A lot of high rise and older building will be in dilapidated conditions or would develop cracks or leakage over a period of time. Design and develop a drone based video surveillance solution that could be used to inspect the high rise buildings or buildings in hazardous conditions. Once the video feed is captured, analyze the video feed to identify the state of the building focusing on finding cracks, water leaks, structural damages etc. |
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| Project No. | 126 |
| Company type | Industry Personnel |
| Organization | Infosys |
| Problem statement title | Autonomous BOT for Retail |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Design and develop an autonomous bot, that could be used in a large retail store to help with the following activities for a customer •The bot should provide a user interface wherein the customer will enter the product name or say the product name and the bot should determine in which aisle the product is located and travel to that spot. The customer will follow the bot •The bot should also display promotional information of the stores |
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| Project No. | 127 |
| Company type | Industry Personnel |
| Organization | AGR Knowledge Services |
| Problem statement title | Forecasting commodity prices |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Problem 1: Consensus price forecast: There are about 400 broker / analyst reports to be read every month. The relevant data has to be extracted and then analysed . These are generally in pdf format. In addition the reports from each broker in the last 10 years have to be evaluated for their accuracy (actual vs estimated) so that the future forecasts are more robust. please see https://drive.google.com/open?id=155H1Hzn0B\_h9rVkJ7bhwJd\_-wJP-O2Q-https://drive.google.com/open?id=155H1Hzn0B\_h9rVkJ7bhwJd\_-wJP-O2Q- |
| You tube Link | <https://www.youtube.com/watch?v=pF4J7PgsIjk&featur> |

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| Project No. | 128 |
| Company type | Industry Personnel |
| Organization | AGR Knowledge Services |
| Problem statement title | Crawling demand drivers |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Problem 2: Demand triggers: There are hundreds of dependent parameters that drive demand for a commodity. The parameters have to be crawled and a thread has to be created on each of these parameters for regular tracking . These alerts will then be fed into the model for further analysis |
| You tube Link | <https://www.youtube.com/watch?v=pF4J7PgsIjk&featur> |

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| Project No. | 129 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Live School for World class free education |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | Connect volunteer teachers (educated housewives, retired persons or similar profile) and students anywhere in the world through an online and live portal. This will be 24/7 open school where any student can join the classes on any subject at anytime from anywhere. There are many orphanages where kids are not getting education and old age homes where educated citizens are willing to share the knowledge but have no way to share. This application will provide a platform for many such use cases. |
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| Project No. | 130 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Solid Waste/ Waste management cost |
| Category | Software |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | Prevention is better than cure.” Hence reducing waste is the best approach of waste management. Build a digital platform to aggregate secondary resources (used clothes, e-wastes, remaining food etc.) at house-hold level and to facilitate distribution to needy (slum people, beggars etc.) and specific industry. Apart from letting people to keep environment clean, this can be used to educate people about better waste management ; by providing information and insights on waste management |
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| Project No. | 131 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Avoid Cash Crop Loss |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | The idea is to help cash crop farmers select the right time to harvest their produce to avoid crop loss due to various diseases and lack of rain. Tamilnadu as a state will stand to gain enormously by using such ML aided applications in advising the farmers on a variety of such issues. The problem statement differs from one state to another and the coverage is also quite wide. Picking one crop for a select set of area and a select set of farmers with selected diseases or crop damage issue could |
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| Project No. | 132 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Self Learning BOT |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | A BOT with self-learning capability with modern natural language processing or deep learning and transliteration cognitive capabilities. The BOTS should scores answer relevancy over time intelligently and can answer tech or non-tech people differently based on their technical ability |
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| Project No. | 133 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Ocean Cleaning |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | Ocean is an integral part of us. How can we keep our beaches and ocean clean? How can we effectively handle the waste management at large scale, especially at the ocean level - which is harming aquatic animals. Ask is a hardware solution that would help in pick up the collected waste transport back to the land for recycling and responsible processing. Also the machine should be equipped with reflector to make them show up on radar, thus mitigate the possibility of collision. |
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| Project No. | 134 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Longevity |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Quality of life is on a steady decline with the onset of white collar jobs. The spending power has gone up but at the cost of time for themselves and family. For the first time in the history of India, people are deficient in vitamin D which is freely available leading to many health risks and diseases. This nutrient deficiency not only leads to poor health but also hinders restorative sleep leading to mental illness as well. A mechanism to encourage people to be active, track users' physical activity and habits tracking and have information handy with real time updates, and being healthy as a community would be a great aspiration. |
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| Project No. | 135 |
| Company type | Industry Personnel |
| Organization | Cognizant |
| Problem statement title | Waste Management |
| Category | Software |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | Households generate degradable (food) and non-degradable (plastics, glass etc.) at a massive scale on a daily basis. Degradable waste can be readily made into compost with simple tools while non-degradable waste could be collected and deposited at the regional centers who recycle the material. An on-demand service would be helpful for the public to manage their plastic waste conveniently. This reduces landfills to major extent. |
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| Project No. | 136 |
| Company type | Industry Personnel |
| Organization | Amadeus Software Labs |
| Problem statement title | Overcoming GDPR in Personalization! |
| Category | Software |
| Technology Bucket | Travel and Tourism |
| Complexity | Complicated |
| Description | General Data Protection Regulation ("GDPR") is a regulation in EU law within European Union (EU) and the European Economic Area (EEA), to protect all EU citizens from privacy and data breaches. At the same time we have an increasing demand for personalization, like personalized travel offers and suggestions. The problem statement is "How can we treat data differently, maintaining the value of personal taste but being able to target specifically, without exposing the data of the individual?" |
| You tube Link | <https://www.youtube.com/watch?v=Y7fh6P6N3ac> |

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| Project No. | 137 |
| Company type | Industry Personnel |
| Organization | Amadeus Software Labs |
| Problem statement title | Using AR/VR to transform Travel Experience! |
| Category | Software |
| Technology Bucket | Travel and Tourism |
| Complexity | Complicated |
| Description | Over recent times, augmented and virtual reality has become increasingly popular within the travel industry. We would like to know "What are the new and innovative ways, the technologies AR and VR can be helpful for travel industry! Basically, we are inviting new solutions and use cases, how AR/VR can be implemented, so that the travel providers like airlines, airports, hotels and travel agencies can enhance their customer's experiences! |
| You tube Link | <https://www.youtube.com/watch?v=Y7fh6P6N3ac> |

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| Project No. | 138 |
| Company type | Industry Personnel |
| Organization | Adani Group |
| Problem statement title | Video Analytics software |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | To make software which can analyze different types of videos taken by HD camera / Drone / Robotic tools, so that no human intervention is required to analyze data by watching continuous video. It has many applications like security / safety where video can analyze persons who has not with him safety equipment, or software can analyze pipe cracks, etc. |
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| Project No. | 139 |
| Company type | Industry Personnel |
| Organization | Adani Group |
| Problem statement title | Virtual reality training program |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | 2) To prepare Virtual Reality (VR) programme which can provide hands on Operation & Maintenance training to Employees in classrooms. E.g. Employee can feel opening the pump / turbine / any equipment while veering VR glasses and step by step learn to do operation & maintenance |
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| Project No. | 140 |
| Company type | Industry Personnel |
| Organization | Tata Steel Processing And Distribution Ltd |
| Problem statement title | Online residual stress measurement in steel strip |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Due to hot rolling, residual stresses are present in steel coils. These stresses are released when strip is cut into small pieces causing strip to twist or bend after cutting. Users of hot rolled steel strip look for flat sheet. Defects like coil set, camber, edge wave, twist or buckle is also not acceptable. Correct knowledge and mapping of residual stress across length and width of the strip is required. Residual stress across the strip length and width to be measured like a heat map after decoiling in Cut-to-Length line.This measurement to be done online under strip running condition at 50-80 meter per minute. Output of measurement will be futher used by strip Leveling equipment for purpose of effective leveling through removal of stress and then cut. |
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| Project No. | 141 |
| Company type | Industry Personnel |
| Organization | Adani Group |
| Problem statement title | robotic instrument to gauage tube thickness |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | 3) To prepare robotic instrument which can move / flow inside boiler tube and identify its thickness during shutdown or make drone with probe to identify boiler tube thickness from outside the boiler tube for full pipe length. |
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| Project No. | 142 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Developing a Calibration Curve for Typical Joints |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | 3D printing of plastics often leads to shrinkage and wrapage of components. Because each component could have a different surface area and volume, the distortion in shape greatly varies between different shapes of components. This poses significant challenge in 3D printing of simple joints and fits that are used to connect two components together. The challenge is to come up with a calibration curve for a typical joint of two components which will act as a ready reference for engineers |
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| Project No. | 143 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Intravenous Infusion Monitoring |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Integrated solution with deployment of suitable sensor, tuning the firmware and developing app to monitor and control the infusion flow. |
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| Project No. | 144 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Inductor in Integrated Circuits |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Integrated circuits have been designed for a long time now, and have aided the developement of hardware in a big way. Most of the analog and digital circuts are possible to be implemented in ICs, but inductor is still not possible to be put in ICs. There is a need to miniaturize inductors and design them into ICs (integrated Curcuits) to allow for low real estate requirement on pcbs and also reduce losses, and also help in EMI / EMC testing. |
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| Project No. | 145 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | WheelChair cum Stretcher |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | In hospitals patients need to be shifted from wheelchair to stretcher, stretcher to beds, bed to wheelchair, or vice versa; which creates unsafe conditions for patients. Also transferring the patients from wheelchair to stretcher, stretcher to beds, bed to wheelchair is always an issue for the attendant or nurse. There is a need for a wheelchair cum stretcher to facilitate the disabled patient’s mobility and to provide novel medical equipment for use in the Indian hospitals. |
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| Project No. | 146 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Real Time Crop Health Monitoring |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | Crop health monitoring is an area which requires lot of attention as a wrong action taken would lead to crop failure. Farmers face issues in determining the optimum amount of water required for a crop, tracking crop development on a real time basis and detecting crop health issues. The challenge is to design a smart application to provide insights on crop development, identify areas of crop stress, and provide alerts on water usage and irrigation requirements to maximize the crop yield. |
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| Project No. | 147 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Household waste Incinerator |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complex |
| Description | Incinerator is a device that burns the waste without the use of oxygen and without giving out fumes. The proposal is to make a small house hold waste incinirator that can run on a smallest possible solar panels. |
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| Project No. | 148 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Existing pumps in the farms to run by solar power |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | Existing pumps in the farm lands are not able to deliver at full potential because of the discontinuity of the electric power supply, presently available solar water pumps usually runs with DC and are different from the common sub-mercible pumps. The proposal is to make solar drive that can run existing sub mercible pumps with solar energy without the use of batteries |
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| Project No. | 149 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Motor Vehicle Emission Reduction |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | It is a known fact that the traditional, internal combustion engine based vehicles generates lots of emissions which are bad for health and environment. To overcome this, there is a lots of development already happening in the electric vehicle and hybrid vehicle technologies. It will be good if we can develop a system which will filter pollutant gases from the vehicle emission. This system also can be retrofitted into existing vehicles so that they are less polluting. |
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| Project No. | 150 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Snap Design were it can with stand 100N pull force |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Design a Plastic enclosure for Electronics circuit board for communication devices. This Product will assemble in the sheet metal frame cut outs. The requirement defined not use screw in the metal frame. The Sheet metals cut-out have 1mm to 10mm thickness (different Frames but same product to be used) and remove the product from the cut-out required 100N pull force. Challenge –Snap Design (plastic) were can with stand the 100N pull force |
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| Project No. | 151 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Immersive Experience |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Immersive experience is a trend where people interact & perceive real world through digital medium. How great would it be to experience anything digitally before experiencing it in the real world? This can be made possible with either Virtual Reality (VR) or Augmented Reality (AR). The challenge is in creating immersive experience with LiDAR point cloud data. We are looking to create a VR Shell app that can create immersive experience using point cloud data as input. |
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| Project No. | 152 |
| Company type | Industry Personnel |
| Organization | Cyient |
| Problem statement title | Securing authenticity of Farmer inputs |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Farmer inputs such as seeds and chemicals are prone to heavy adultration especially during the peek season resulting into damage of crop and lower yields. Manier times establishing the input traceability, ensuring accountability, and input quality is a big challenge. Source of adultration is untraceable due to complex distribution network and lack of book keeping. Building an application using blockchain technology can help farming which enhances the traceability of each product. |
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| Project No. | 153 |
| Company type | Industry Personnel |
| Organization | IndiaNeoDesigns |
| Problem statement title | Referral of Severe Acute Malnourished (SAM) childr |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Nearly 20 million USD per year is invested to operationalize 1151 Nutrition Rehabilitation Centers (NRCs) under National Health Mission to treat children with Severe Acute Malnutrition (SAM). Inefficiency in detection of SAM, and poor referral and lack of tracking system leads to underutilization of services. A mobile application that will facilitate and track referrals of children with SAM to NRCs and provide real-time bed availability status is required. |
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| Project No. | 154 |
| Company type | Industry Personnel |
| Organization | IndiaNeoDesigns |
| Problem statement title | Fetal Distress Classification based on Cardiotocography |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Fetal distress before and during childbirth indicating that the fetus has been receiving inadequate oxygen. Cardiotocography monitors two vital parameters, i.e Fetal heart rate (FHR) and uterine contractions (UC). These time series data and can be used to detect fetal distress. Goal: a system that takes these two time series data as inputs and classifies them as "Distress" and "Normal" Source data: https://physionet.org/physiobank/database/ctu-uhb-ctgdb/ Methods of processing could include Support Vector Machines/ Principal Component Analysis or any other method of choice that discriminates the best. Problem: https://drive.google.com/open?id=18oYVdQHq6Jo-9blXCpQwy3g-HBZzErGL |
| You tube Link | <https://www.youtube.com/watch?v=_ROHhPvQsK0&t=7s> |

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| Project No. | 155 |
| Company type | Industry Personnel |
| Organization | Hindustan Unilever Ltd |
| Problem statement title | Smart Demand Predictors |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Accurate Demand planning is essential to unlock efficiency in value chain. Lack of accurate real time demand prediction at Distributor and Point of Sale leads to inefficiencies and unmet demand specifically for seasonal and impulse products like Lipsticks, Ice-creams etc. The challenge is to design smart demand prediction systems which can be installed at Distributor or POS point. they should be able to signal real time change in demand patterns and help in increasing demand forecast accuracy. |
| You tube Link | <https://www.youtube.com/watch?v=Sj8AFU3Wx9g> |

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| Project No. | 156 |
| Company type | Industry Personnel |
| Organization | Hindustan Unilever Ltd |
| Problem statement title | Digital Reverse Logistics for Damaged Goods |
| Category | Software |
| Technology Bucket | Waste Management |
| Complexity | Complex |
| Description | Reverse Logistics is the process of moving goods from their point of consumption or sales for recycling, disposal or reuse. We take back damaged/expired products from about 1.5 million retailers across India. The current process is slow and manual. It takes about 8-12 weeks to process the payment for returned goods. The manual entry makes it difficult to track, audit and analyze the inefficiencies. The Challenge is to design complete digital reverse supply chain for damaged/expired products. |
| You tube Link | <https://www.youtube.com/watch?v=F_sQ67NPKM0> |

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| Project No. | 157 |
| Company type | Industry Personnel |
| Organization | Hindustan Unilever Ltd |
| Problem statement title | Digital In-store Merchandising |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | Retail stores are changing from utility based generic mass market stores to personalized and entertaining shopping experience. We want our products to stand out from the rest in Modern stores by developing innovative digital in-store merchandising concepts. They should generate curiosity, gather attention and bring joy to the consumer. The solutions should need minimal expense on hardware, should be easy to scale, occupy less space. |
| You tube Link | <https://www.youtube.com/watch?v=iRvaWHk3A8k> |

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| Project No. | 158 |
| Company type | Industry Personnel |
| Organization | Hindustan Unilever Ltd |
| Problem statement title | AR/VR Experience for Beauty Products |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Digital and mobile technology is bringing innovative ways to bring customer delight in the retail stores. Augmented reality/Virtual reality can help in heightening customer experience and bring several "wow" moments while they are buying beauty products. It can help the store assistants in selling the right product to the right customer. The challenge is to design frugal AR/VR based solutions which can help the customers and assistants while trying, testing or buying beauty products. |
| You tube Link | <https://www.youtube.com/watch?v=dUoRchsBt28> |

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| Project No. | 159 |
| Company type | Industry Personnel |
| Organization | Hindustan Unilever Ltd |
| Problem statement title | Track and Trace Supply Chain |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Every year Millions of units of consumer products are transported from farms to factories to distributors to retailers and finally the end consumer. To deliver Quality and transparency, Organizations need to be able to trace each product to its origin. The challenge is to design a solution to track each of the millions of units from point of origin to retailer. Traditional bar code based solutions becomes difficult to manage beyond the distributors. The design should need minimal human effort. |
| You tube Link | <https://www.youtube.com/watch?v=-J8K9vXUkg4> |

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| Project No. | 160 |
| Company type | Industry Personnel |
| Organization | Kirloskar Oil Engines |
| Problem statement title | SCR efficiency deterioration monitoring from real |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Engine manufacturers are legally responsible ensuring limited deterioration of SCR efficiency over specified life of the engine usage in field. Kirloskar Oil Engines is interested in development of “on line SCR efficiency monitoring system” and communicate the SCR efficiency data. This project should use existing NOX sensors, mass flow, diesel flow and temperature online data available with ECU to monitor SCR efficiency at the operating points in field with some statistical confidence. |
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| Project No. | 161 |
| Company type | Industry Personnel |
| Organization | Tata Motors |
| Problem statement title | An Open sourced Motor Controller for Hybrid Veh. |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Due to openness of “Raspberry Pi”, a powerful computer, and it’s low cost, it is used extensively in many Industries and across innumerable applications. On similar lines, we want to create an “Open Motor Controller” which can be used in hybrid vehicles at low cost. Components, Building blocks and even Sub-assemblies are available in the open market but the challenge is to integrate them, package them in a box and make it an ECU with requisite physical and electrical protection. |
| You tube Link | <https://www.youtube.com/watch?v=fy36dSYG0PU> |

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| Project No. | 162 |
| Company type | Industry Personnel |
| Organization | Tata Motors |
| Problem statement title | Vehicle Consumables Prognostics |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | Can we devise a novel solution for vehicle owners where they are able to take an informed decision on whether to replace the consumables with respect to its remaining useful life while also considering the effect of not changing it within a specified time? Some of these consumables are: 1. Air Filters 2. Oil Filters 3. Engine Oils 4. Tires 5. Clutch plate 6. Brake Liners 1.You can choose to take up any one of the consumables listed above. 2.Go beyond putting sensors. 3.Low cost. |
| You tube Link | <https://www.youtube.com/watch?v=cUUOan_wHVY> |

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| Project No. | 163 |
| Company type | Industry Personnel |
| Organization | Tata Motors |
| Problem statement title | Intelligent Battery Management |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Simple |
| Description | Have you ever been left stranded with your vehicle because it just wouldn’t start? Many a times this is due to the battery of the vehicle, more specifically either its state of charge (SOC) or its state of health (SoH). The challenge is to devise a user friendly APP based Battery Management Tool through which the user can get the critical information about the SoC as well as the SoH along with the set of actions required to ensure a reliability of starting is maintained. |
| You tube Link | <https://www.youtube.com/watch?v=HQZKRmubeeE> |

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| Project No. | 164 |
| Company type | Industry Personnel |
| Organization | Tata Motors |
| Problem statement title | Intelligent trip management for Electric Vehicles |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | The biggest anxiety of any electric vehicle owner (Bikes, Cars, Buses and Trucks) is the range they can derive out of a single charge, essentially because of the limited opportunity to charge the vehicles available today. In this context the challenge is to develop a smart algorithm (a complete simulation model) which takes all the noise factors of the outside environment (e.g. via open APIs) and uses it to manage (via a control logic) the vehicle parameters to ensure optimal battery utilization |
| You tube Link | <https://www.youtube.com/watch?v=kwNJhKhFxmo> |

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| Project No. | 165 |
| Company type | Industry Personnel |
| Organization | Tata Motors |
| Problem statement title | The Mobility Challenge |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | The Challenge is to develop a system to gather anonymized data of people’s movement (no privacy infringement) in a City and then suggest a use-case of how this data can be used to improve any or all of the following attributes of mobility: 1.The need for mobility: Analysis of mass movement across long distances.2.The Efficiency of moving from A to B: 3.The discovery of demand patterns for specific modes of transport.4.The carbon footprint trails.5.The safety of travel.6.Out of Box Insights. |
| You tube Link | <https://www.youtube.com/watch?v=JvHtV2Smuu0> |

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| Project No. | 166 |
| Company type | Industry Personnel |
| Organization | Kirloskar Oil Engines |
| Problem statement title | Air filter monitoring |
| Category | Software |
| Technology Bucket | Sustainable Environment |
| Complexity | Complicated |
| Description | Modern CRDI engines are equipped with air mass flow sensor and pressure sensor. There is need to get early warning when air filter gets chocked. algorithm has to be developed to provide early signal to operator about air filter choking. It will help is service of vehicle to be carried out at appropriate time. |
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| Project No. | 167 |
| Company type | Industry Personnel |
| Organization | IndiaNeoDesigns |
| Problem statement title | App for Pediatric Chronic Care |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Babies born very premature or those with cerebral palsy often have additional needs, for example, a gastric tube. Parents and family members are generally unfamiliar and need a lot of help and assistance. Information about usage and ongoing care is not readily available. There is a need for helping parents navigate the maze of information. Goal: An multilingual educational app (android/iOS) with editable content for parents of children with long-term disability. |
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| Project No. | 168 |
| Company type | Industry Personnel |
| Organization | IndiaNeoDesigns |
| Problem statement title | Pediatric Teledermatology |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Diagnosing neonatal and pediatric skin conditions does not require face-to-face communication and can be done remotely. There is a need for an App based system which receives images from a phone, allows the "physician" to 1) receive an image 2) tag the diagnosis, 3) automatically store the image for research use and 3) respond to the sender. There is no need to make an automated diagnosis. Overview: https://drive.google.com/open?id=1ETZMd3tCqieKUjR1PgHGqX6NYTzx07dNPc7Wd1SrVNU |
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| Project No. | 169 |
| Company type | Industry Personnel |
| Organization | Pepperfry |
| Problem statement title | Create a 3D AR mobile buying experience |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Buying furniture online needs to provide customers a way of experiencing the look and feel of products within the context of their home. Design and implement a mobile experience where they can place 3D objects from Pepperfry’s product catalogue in their home/office setting using AR - visualise the items in a 3D perspective, change/add multiple items and then proceed to checkout. The 3D objects and checkout flow will be provided by Pepperfry |
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| Project No. | 170 |
| Company type | Industry Personnel |
| Organization | Pepperfry |
| Problem statement title | Last mile route planning from delivery centers |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | In the order fulfilment process, last mile delivery plays a key role. Once the items reach the delivery centres we need to come up with way to most efficiently plan the route to be taken for the delivery which considers - distance, customer availability, traffic status, vehicle availability and capacity and any other factors. Design a solution which takes the input of all orders to be done on a day and creates the most optimised routes and times to be used by delivery fleet for timely delivery. |
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| Project No. | 171 |
| Company type | Industry Personnel |
| Organization | Thermax |
| Problem statement title | Energy Storage Solutions using earth abundant materials |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | Renewable energy requires energy storage devices to supply round the clock power. Current solutions use rare materials such as Lithium which are not readily available. Storage Solutions using earth abundant materials is the need of the hour |
| You tube Link | <https://www.youtube.com/watch?v=YSfaHHkAnl8> |

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| Project No. | 172 |
| Company type | Industry Personnel |
| Organization | Thermax |
| Problem statement title | Develop Innovative methods for treating Sewage |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | The sewage water from large cities and towns comes in huge volumes, contains unacceptable level of CoD/BoD and hence needs an extensive treatment systems. Currently it is being treated mainly through biological aerobic treatment route which consumes energy and occupies considerable space. The anaerobic treatment which usually results in energy generation in terms of bio-gas is not suitable very low CoD/BoD. These plants also face problem of creating local pollution.Hence current sewage treatment methods for municipal sewage require breakthrough change in designing. Hence the challenge is to develop new way of treating the sewage at municipal level or at co operative society level where the treatment process happens as the sewage flows in the U/ G pipe lines carrying the sewage to the common facility thereby making such a facility redundant or generates energy in a cost effective manner. The depiction should be based on scientific calculations for the processes involved in each of the proposed case |
| You tube Link | <https://www.youtube.com/watch?v=qQ9p-R7MLt0> |

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| Project No. | 173 |
| Company type | Industry Personnel |
| Organization | Thermax |
| Problem statement title | Minimizing reject during water purification |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complicated |
| Description | The current drinking water devices generate 4 to 5 times waste ( reject ) water for every liter of drinking water. Develop a system which can either reduce this reject water or make it zero liquid discharge. The device should be generate WHO quality drinking water from a sub surface and surface water resource available in the country. The water device should be at 10 LPH capacity to 1000 LPH capacity . The students can work on either models but preferable to work on the larger capacity say 400 L |
| You tube Link | <https://www.youtube.com/watch?v=gqxhnVbD-8E> |

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| Project No. | 174 |
| Company type | Industry Personnel |
| Organization | Oil India Ltd |
| Problem statement title | Sludge developed inside Crude Oil Transport Pipe |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Oil India Ltd. is Running a sub-surface (Part 16-inch & part 14-inch) Crude Oil Transportation pipeline from Upper Assam Duliajan to Barauni to transport crude from Upper Assam belt. The Crude oil being waxy in nature, heavier hydrocarbons gets deposited inside the pipe as soon as the temperature comes below the wax appearance temperature. To clean the deposits, regularly Pigging is carried out in all the sectors. The solution is required for Profile and Trend of Wax/Sludge deposition. |
| You tube Link | <https://www.youtube.com/watch?v=3mzlI-BSvD0&featur> |

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| Project No. | 175 |
| Company type | Industry Personnel |
| Organization | Oil India Ltd |
| Problem statement title | Mechanism for Crude Oil Wax Handling in Pig Barrel |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | In Oil India Limited Pipeline due to waxy nature of Assam crude oil, pigging operation is carried out in fortnightly to remove the deposited wax from pipeline. In waxy crude oil pipeline, solid wax is accumulated in between pig and pig receiving barrel door creating problem for removal of pig from barrel .It is proposed here to develop a cost benefit and time saving mechanism either chemical, mechanical or combination of both for easy removal pig from barrel by dissolving the wax in the barrel |
| You tube Link | <https://www.youtube.com/watch?v=LoJpR7YB36o&featur> |

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| Project No. | 176 |
| Company type | Industry Personnel |
| Organization | Oil India Ltd |
| Problem statement title | Pipeline Pilferage Prevention & Detection system |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Design of Pipeline Pilferage Prevention & Detection System: The Pilferage activity involve illegal tapping into oil pipelines and withdraw(steal) of valuable product, being transported in the Pipeline. So far, no methodology for detecting exact location of pilferage/ leakage in the pipeline is available. So design of such System is required which can prevent and detect Pilferage in oil pipelines. |
| You tube Link | <https://www.youtube.com/watch?v=2YyCqmHKVcY&featur> |

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| Project No. | 177 |
| Company type | Industry Personnel |
| Organization | ANIK |
| Problem statement title | Drought situations in rain shadow regions of Maharashtra |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | In Marathwada the drought is the main issue. Mainly due to the very less rain fall, drought condition continues year by year. Due to drought, community is facing drinking water problem. No sufficient water for cattle and shortage of cattle fodder. Drought is affecting total agriculture sector because water scarcity is the big issue. Can the students develop technology to help generate and manage water? We may also explore possibilities of generating water from thin air. |
| You tube Link |  |

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| Project No. | 178 |
| Company type | Industry Personnel |
| Organization | ANIK |
| Problem statement title | Ghee making machine |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | 10 - 15 kg ghee making machine for women in rural areas. It is usually seen that ghee making machines are of larger quantities and rural women do not have the capability to buy large machines. So we would like to empower them by giving access to small machines to churn ghee and support the economic conditions of their families. |
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| Project No. | 179 |
| Company type | Industry Personnel |
| Organization | ANIK |
| Problem statement title | Cattle feed manufacturing from local agriculture produce |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | Cattle feed is highly required to farmers. But the price of the feed is not affordable, comfortable or reasonable. If the farmers get feed producing machine at village level with comfortable cost, it will useful to farmers and dairy industry. Feed producing machine mixes, grinds and churns different kinds of grains, food waste, husk, leaves etc to make feed for cattle. The feed can be in powder form or bricks. We are hoping to have a small feed producing machine for use between small groups of rural farmers and empower them to improve their economic situation. |
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| Project No. | 180 |
| Company type | Industry Personnel |
| Organization | KPIT |
| Problem statement title | Automatic Pothole detection while driving |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | Every year we lose more than 1 lakh lives on Indian roads due to accidents and the proportion of these accidents due to pot holes on the road is quite significant. If these pot holes can be detected in real time while driving, it will benefit two wheeler riders by avoiding it especially when the pot holes are covered by water during monsoon. |
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| Project No. | 181 |
| Company type | Industry Personnel |
| Organization | KPIT |
| Problem statement title | Use of plastic to construct roads |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complex |
| Description | Plastic waste is one of the top most menace the world is facing today. Blanket ban on use of plastic too is quite difficult to implement considering the current life style of mankind. One of the novel ways of disposing plastic waste could be to use it constructively for other tasks and one of the novel use of plastic waste could be to use it to construct good quality roads. Demonstrate a technology, process for using plastic waste effectively to build roads. |
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| Project No. | 182 |
| Company type | Industry Personnel |
| Organization | KPIT |
| Problem statement title | Generation of water from thin air |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complicated |
| Description | Availability of clean and pure drinking water is a challenge faced by majority of rural as well as urban areas in India. There has been a lot of work done on developing technologies for extracting moisture out of air to make it available in the form of pure water. But a cost effective solution is what a country like India needs where the cost of generation of water is less than Re. 1 per litre of water. |
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| Project No. | 183 |
| Company type | Industry Personnel |
| Organization | KPIT |
| Problem statement title | Modeling the movement of people in a city |
| Category | Software |
| Technology Bucket | Travel and Tourism |
| Complexity | Complicated |
| Description | Efficient and safe public transport system within cities is the need of the hour. This would be possible by bridging the supply-demand gap. To achieve this, accurate tracking/estimation of movement of people is required. Demonstrate a mechanism to accurately capture movement of people within city throughout the day and an algorithm to estimate adequate buses required to match the demand. |
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| Project No. | 184 |
| Company type | Industry Personnel |
| Organization | Aurobindo Pharma |
| Problem statement title | Effluent Analysis for Anti-Biotic Presence |
| Category | Hardware |
| Technology Bucket | Life Sciences |
| Complexity | Complicated |
| Description | Development of protocol for analysis and quantification of presence of different pharmaceutical products There are no standard methods available for testing and quantification of products, particularly when present in very low concentrations in waste water for assessment and achievement of level of water treatment efficiency Expected Solution Hence, development of protocol for analysis and quantification of presence of pharmaceutical compounds/effluent properties . |
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| Project No. | 185 |
| Company type | Industry Personnel |
| Organization | Aurobindo Pharma |
| Problem statement title | Pharma Logistics - Tracking Vital Parameters |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complicated |
| Description | To develop a solution to Track & Trace the goods using IOT methodology to track variations in Vital Parameters such as Temperature, Location & Damages for Overseas Shipment Expected Solution To develop a solution to Track & Trace the goods using IOT methodology to track variations in Vital Parameters such as Temperature, Location & Damages Benefits Real-time Temperature Monitoring Real-time Latitude/ Longitude Monitoring & Identify mis-routes |
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| Project No. | 186 |
| Company type | Industry Personnel |
| Organization | Aurobindo Pharma |
| Problem statement title | Pharma Pull Production System |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complex |
| Description | Evolving a pull-production system to help optimize working capital and inventories   Expected Solution   A dynamic simulation software which helps better planning of pull system. It shall provide kanban calculation system for internal flow/movement of material/semi finished and finished products. It should include visual display system to operating staff on the flow and kanbans to be delivered |
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| Project No. | 187 |
| Company type | Industry Personnel |
| Organization | Aurobindo Pharma |
| Problem statement title | Relative Attractiveness Index of World Markets |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complex |
| Description | To utilize heuristics & predictive AI to dynamically map graphically multiple parameters using mix of internet scouring and syndicated databases Solution The AI will utilize dynamic data base to update Country market rating on a select cycle for various pharma formulations products |
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| Project No. | 188 |
| Company type | Industry Personnel |
| Organization | Aurobindo Pharma |
| Problem statement title | High end Access Control Systems |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Simple |
| Description | Fool proof Employee Access control systems to ensure that there is no tail-gating of unauthorized personnel Expected Solution Software-sensor based solutions that measure the exact body mass thereby restricting only the authorized user and creating an alert system during unauthorized entry |
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| Project No. | 189 |
| Company type | Industry Personnel |
| Organization | Pathirakha Foundation |
| Problem statement title | In Surgery Video Annotation |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Surgeons perform endoscopic surgery by looking at the live camera view fitted inside an endoscope. Endoscopes are tiny telescopic tubes inserted into patients’ bodies for performing surgery on target with high precision with minimal collateral damage. Inexperienced surgeons often find it difficult to identify what they are seeing on the camera view during surgery. This is because, the endoscope only shows a magnified planar view of a tiny portion inside the body, without any other visual references. It would be good to have a solution which recognizes the body parts, annotates them and also provides a spatial frame of reference to the surgeon on a live camera view. |
| You tube Link | <https://www.youtube.com/watch?v=UZGBEY4TQ98> |

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| Project No. | 190 |
| Company type | Industry Personnel |
| Organization | Bharat Electronics Ltd |
| Problem statement title | DVD Copy Protection |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Simple |
| Description | Develop a solution for copy protection of a DVD. It should not be copy-able to any other PC or DVD or media, in any OS platform. Some solutions are available from foreign vendors. But they require connection to Internet during DVD burning, which may not be acceptable in some cases. Hence an indigenous solution that does not require internet connection is required. |
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| Project No. | 191 |
| Company type | Industry Personnel |
| Organization | Bharat Electronics Ltd |
| Problem statement title | Text To Speech (TTS) for Indian languages |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | TTS is important for many of the government initiatives in Digital India program to help people who cannot read/write or unable to understand the menus of the application.Current TTS solutions are based on English. Local language support is minimal and existing solutions are based on English accent. TTS solutions for Indian languages with an Indian accent should be developed. The solution provided should support multiple Indian/regional languages with local accent having multiple voice selection |
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| Project No. | 192 |
| Company type | Industry Personnel |
| Organization | Greefi Technologies |
| Problem statement title | Block-chain based certificate validation |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Description: Storing the school/university/board certificates is a recurring process. For the Organization, verifying the authenticity of the certificates is tedious and cumbersome . The proposed solution will help the institutions to store the certificates in the decentralized way using the block-chain system and give access to any organizations or any institution with the consent of the individual using multi-sign. What we want: sharable decentralized storage using digital signature and access |
| You tube Link | <https://www.youtube.com/watch?v=8hXl8ormv7w&featur> |

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| Project No. | 193 |
| Company type | Industry Personnel |
| Organization | FIS SOLUTIONS(INDIA) |
| Problem statement title | Ima Market |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Mobilize Indian IT skill force to create/improve National Importance Systems And application. Create a platform where IT skill force can contribute algorithms (codes/programs/modules ,etc.) Story: Ima Market in Manipur is 500 yrs. old and is the only Asian market run by Women. These women are the only bread earner for the whole family. It’s is a prosperous market, And too reflect the prosperity of the Nation. However, when earth quake strikes these market was in ruins for months. The Imas (Mothers),not able to sell, their family suffers. Their anger grew towards system and government. Proposal: Renovating/Reconstructing/FIXING the damaged market will take time. It depends on lots of factor. Why not Develop/Deploy a ECommerce platform overnight? Use existing India Ground Forces like post office for delivery. This would have been a HUGE relief. Ima market's story is only ONE in Many. Indian has huge IT skill force. They want to contribute. Many doesn’t have spare money BUT have knowledge And skills. They just don’t know how to and They don’t have platform (Ecosystem). Believing is Indian IT forces, we proposes to create TWO platforms, for which we need intelligent minds to create an algorithm. 1st platform: An open Web portal, where all open National Importance Systems And application gets listed. Against each projects there be two types of contributors 1) Financial 2) Knowledge. 2nd Platform, (This is where we will need all IT minds to develop algorithm(s)). Individual willing to contribute their knowledge and help improve existing government applications’ or new applications which are listed on the 1st portal. will use this platform (eco system) to contribute. This platform is a complete ecosystem to develop application continuously contributed via all Indian citizen who can program. The platform will be AI, DevOps, GitOps, Self-learning Codes etc. Asking: Assume, There is a running application (e.g. an e-commerce website, flipkart). Contributor took Its source code(being opensource) and eventually change them (adding new feature, fixing issue). Now they promoted them back to the scm (The sourceCode repository from where they took). This activity will be done by multiple people at any instance. Students! Please develop an algorithm (combination of tools and scripts) which will do the following. 1. Check the code promoted by a contributor automatically. If fails standards email back to contributor 2. Check if enough unit level testing is provided. Else email back to contributor 3. Merge main source code with his code in a temporary code branch and test integration, Email back to contributor 4. Deploy the merge code in a temporary container, email back to contributor 5. Auto test all the existing features with existing script and new features with new script provided by contributor, email back to contributor 6. If, all is good merge the contributor changes to main code and email back to contributor/ project owners. (refer how google/Facebook does it. However, Here it’s for huge IT population of India.) |
| You tube Link | <https://www.youtube.com/> |

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| Project No. | 194 |
| Company type | Industry Personnel |
| Organization | FIS SOLUTIONS(INDIA) |
| Problem statement title | An income tax fraud detection idea using AI & ML |
| Category | Software |
| Technology Bucket | Finance |
| Complexity | Complex |
| Description | There is a grocery shop owner in Aundh Pune (decent area to live) who is filing an average income tax of 10k every year. This corresponds to a profitable income of 3L per annum. Considering a good profit margin of 20%, his total sale should be around 15L per financial year. Through our product that uses AI and ML, this will verify this data, by backtracking many related transactions. 1. As per the address and aadhar information, he has two kids studying in school having average yearly expenses of 1.5L each(totals to 3L). 2. Property tax to the Govt reveals, he is living in an area that costs around 40K (taxes and maintenance). 3. Owns a car – 60k annual maintenance. 4. Pays 2L salary to his shop employees. 5. Minimum living cost is 4L for a family of four. 6. Average customers per shop in the area is 5K, per person average grocery expenditure is 2k(monthly). This does not include online shopping. 7. Pan information indicates 1L jewelry shopping this financial year. 8. Online shopping delivered at his address - 50K. As per this data, his total income should be around 50L whereas he has declared only 3L( a vast difference!!). The calculations indicate he is actually hiding his total income, and stealing taxes. With an efficient system in place, these thefts can be identified, and penalized. |
| You tube Link | <https://www.youtube.com/> |

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| Project No. | 195 |
| Company type | Industry Personnel |
| Organization | FIS SOLUTIONS(INDIA) |
| Problem statement title | Land Real estate Registration |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Land/Real estate registration is corruption prone process which leads to lot of Benami transactions. Government tries it’s best to eradicate the malpractices, but it doesn’t yield fruitful result. One way to solve this problem is to use blockchain technology in order to capture all the Benami transactions related to Land/Real estate deals. |
| You tube Link | <https://www.youtube.com/> |

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| Project No. | 196 |
| Company type | Industry Personnel |
| Organization | FIS SOLUTIONS(INDIA) |
| Problem statement title | eFramer |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Indian farmers face lot of problems when it comes to buying seeds & fertilizers from authorized channels at the right price. Same applies to selling the farm produce at the right price so that farming becomes profitable occupation. Need of an hour is to build a e-portal for farmers where-in they can buy seeds & fertilizers at the optimal price. This portal should also allow consumers to bid/ask for the farm produce thus eradicating middle man and benefiting both farmers and consumers. |
| You tube Link | <https://www.youtube.com/> |

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| Project No. | 197 |
| Company type | Industry Personnel |
| Organization | FIS SOLUTIONS(INDIA) |
| Problem statement title | Chatbot for eGoverance |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Mega bot (chatbot) which provides information related to all government sponsored loans/insurance schemes at single place. This interactive chatbot should be able to pull information from various sources like nabard, rbi, etc and should be able to assist the users with the relevant information. |
| You tube Link | <https://www.youtube.com/> |

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| Project No. | 198 |
| Company type | Industry Personnel |
| Organization | Shree Cement Ltd |
| Problem statement title | Method of separating waste from limestone |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | The limestone deposit is semi metamorphosed which has undergone 4 fold deformation. Pegmatic and amphibolic intrusions of irregular trend are mixed in such a manner that the segregation is very difficult. If we are able to find a proper sorting/ separation method, it will help in mineral conservation |
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| Project No. | 200 |
| Company type | Industry Personnel |
| Organization | Shree Cement Ltd |
| Problem statement title | Use of limestone waste to achieve ZERO waste minin |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | Alternate use of mines waste should be explored to achieve the goal of ZERO waste mining and its legal constraints must also be judiciously removed. The Samples can be procured from Shree Cement Limited, Bangur City, RAS (Dist Pali). The waste is low quality of Limestone mixed with Sand / mud. This is extracted between the layers of Limestones during mining. |
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| Project No. | 201 |
| Company type | Industry Personnel |
| Organization | Shree Cement Ltd |
| Problem statement title | Counting of cement bags in loaded truck |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | How counting of cement bags can be done in a loaded cement truck. Before loading the bags it is manually counted and loaded however a system based recheck needs to be done to verify. |
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| Project No. | 202 |
| Company type | Industry Personnel |
| Organization | Shree Cement Ltd |
| Problem statement title | Measuring quantity of cement and clinker |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | The existing method of measuring quantity thru flow meter provides accuracy of (+ & -) 5% to 10% in both clinker and cement, which is a big loss. Need some better system for this. |
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| Project No. | 203 |
| Company type | Industry Personnel |
| Organization | DELL EMC |
| Problem statement title | Ultra-Low power Nano implantable devices for early cardiac arrest detection |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | In general, usage of technology has tremendously increased in preventive healthcare. There is sufficient scope to develop devices and algorithms to detect symptoms between systole and diastole to conclude possible cardiac arrest. To provide the solution, student teams need to design and develop implantable device and concretely identify blood symptoms along with ECG data. The device should be capable to send real-time data and the receiver shall have the algorithms to interpret the data and suggest appropriate actions. There are 3 challenges: 1.Device has to be implantable into human body. 2. The device has to be real-time in nature with an ultra low power nano design to be available economically. 3.The algorithm has to be a trainable model to suit different types of symptoms. |
| You tube Link | <https://www.youtube.com/watch?v=9emAmwJ3vFw&featur> |

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| Project No. | 204 |
| Company type | Industry Personnel |
| Organization | DELL EMC |
| Problem statement title | Predictive analysis on Medicines & Doctors availability in Government hospitals |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Development of a Healthcare Information system to provide predictive analysis on Medicines availability in Government hospitals & Predictive analysis on increasing the efficiency of the hospital by managing availability of doctors and specialists. Description: Government hospitals provides medicines for the treatment to the patients based on the diagnosis. During the peak time of a disease, some medicines are not available in the hospital. Based on patients historical and current data, system can generate a report on what all medicines should be available in the hospital and in what quantity at particular time and location of the hospital. Doctors and specialists availability needs to be managed as per the inflow of patients. Many times patients do not find the required doctor during the peak of a disease or shortage of doctors in a hospital. Based on patient inflow for a particular ailment or disease, historical data and current data, system could generate the requirement of number of doctors required in a hospital on daily basis and also during a peak of a disease. Many times, doctors are not available when patients needs them more, e.g. on weekends, holidays, evenings etc. • Target customer – Indian Government healthcare department • Use Analytics to bring in efficiency in Operational functioning • Specific use cases under purview of this program: – Predict Medicine availability in Government hospitals for a given time period (month, quarter etc.) – Predict number of doctors and specialists required during a given time period (month, quarter etc.) Features: • Browser and Map based reporting and analysis on • Medicine Usage • Inventory/Costing/Budgeting • Identify disease • Disease trending based on diagnosis • Health Program Implementation Initiative trackers • Increase the operational efficiency of patient treatment • Optimize utilization of specialists/experts • Contexts Search on diagnose, Medicines etc. • Increase efficiency of treatment/prescripription |
| You tube Link | <https://www.youtube.com/watch?v=B3aRkmV8Yvw> |

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| Project No. | 205 |
| Company type | Industry Personnel |
| Organization | GE Healthcare |
| Problem statement title | Robust/Affordable fetal heart monitoring |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Background: Approximately 6 lakh still births happen in India. Around 50% of them are during labor. Some still births can be prevented by monitoring fetal heart rate. Having this information can help the obstetric team take the appropriate steps during labor. Problem Statement: Develop a solution to accurately measure the frequency of an object of approx. size of 1 cm, placed at a distance (ranging 10 cm to 100cm), oscillating at 1 – 5 Hz.It should be affordable (<20$) and compact |
| You tube Link | <https://www.youtube.com/watch?v=GYHGxVsFUds> |

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| Project No. | 206 |
| Company type | Industry Personnel |
| Organization | Schneider Electric |
| Problem statement title | Efficient Embedded Search engine for million records in an edge device |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Brief: • In the era of IoT there are plenty of edge control devices that collect data, aggregate, stores and bridge to the cloud. • They are also expected to do minimum in premise analytics & decisions, while they aggregate millions of records in a large scale IoT solution. • An efficient search engine which is embedded in the IoT edge control device would speed up the analytics, improve user’s operational efficiency. A few considerations: • Consider the Embedded device is equipped with webserver, webpages for user interactions. It contains onboard embedded memory as well as expandable memory by micro SD card slots. • Teams can use any popularly known embedded targets for their experiments and demonstrations. Open sources can be reused with duly respecting any license terms applicable. Simulated data or a real data can be used. Data shall be heterogeneous data. Outcome: • The expected outcome would be an end to end solution for the aforementioned requirements. It can also be a partial solution specific to the data storage like innovative file systems for edge devices, innovative storage of data records, retrieval of the records or an innovative search engine that finds and populates the relevant data or records as per the user input, innovative and efficient linking of data dynamically within the edge device, etc. • If there is any specific ideas to improve in the hardware or interfaces to address the above said requirement is also in the scope to produce as final outcome. Results: • A mere integration of well-known existing techniques & existing solutions is not expected. Results should highlight the specific improvement, uniqueness in the outcome compared to the existing state of the art. Practical implementation is preferred as a Proof of Concept (PoC) rather than a theoretical proposal. However, the outcome shall present concept document, theory along with implemented PoC. Results to demonstrate tangible benefits or comparison study wherever applicable. |
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| Project No. | 207 |
| Company type | Industry Personnel |
| Organization | Gail (India) Ltd |
| Problem statement title | AI powered Server Log Management Software |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The AI powered software solution should be automatically fetch error logs from servers / applications / databases and categorize/ segregate them based on severity and frequency. There should be dashboards for various types of logs. The solution should have capability to visit Google, Bing and relevant OEM support sites for searching KB for solving the errors mentioned in logs and suggest the relevant link as possible solutions. The target is 95% effectiveness in relevance of links. |
| You tube Link | <https://www.youtube.com/watch?v=2JIEn4ZtIg4> |

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| Project No. | 208 |
| Company type | Industry Personnel |
| Organization | Gail (India) Ltd |
| Problem statement title | Gas Dehydration for Pipeline Transportation |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | The presence of moisture in gas is detrimental to the Pipelines transporting these gases. GAIL is in search of very low cost technologies for removal of moisture from Natural Gas from these local fields for dew point depression with a minimum area requirement and minimum operating cost. |
| You tube Link | <https://www.youtube.com/watch?v=bbMG-8VolWs> |

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| Project No. | 209 |
| Company type | Industry Personnel |
| Organization | Gail (India) Ltd |
| Problem statement title | Automatic Stream Changeover for Flow-metering |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | For measuring very low flow generally a small meter stream is added as standby. A system is required to be devised which checks the flow passing through the MAIN big metering stream and if the flow goes below a pre determined set point, automatically the Low flow stream is taken in line by opening its valves and subsequently closing the main big meter valves. System need to ensure that low flow meter has become online before closing the main meter valves. |
| You tube Link | <https://www.youtube.com/watch?v=I88i57dzE0g> |

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| Project No. | 210 |
| Company type | Industry Personnel |
| Organization | ARAI |
| Problem statement title | Automated Adverse Road Condition Detection |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | The road conditions like pot holes, un marked speed breakers and oil spills shall be detected by a system using cost effective sensors like accelerometers, infra-red sensors, laser sensors, vision based sensors. The output shall be a system architecture and software algorithm for identification of the above road conditions. |
| You tube Link | <https://www.youtube.com/watch?v=mCnfQnP_iVA> |

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| Project No. | 211 |
| Company type | Industry Personnel |
| Organization | GE Healthcare |
| Problem statement title | Continuous Non-Invasive Blood Pressure (NIBP) Meas |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Background: Blood Pressure (BP) is a vital monitoring parameter in clinical examinations. From several years to till now, cuff based methods has been used to measure BP non-invasively. Due to limitations such as intermittent measurement of BP (long intervals), inaccuracy due to patient stillness, discomfort due to wrapped cuff, frequent need for calibration and improper manual interventions which results unfavorable/unreliable outcome. Also, patients having stents or patients with thickened arteries have cuff based BP measurements which are inaccurate.   Problem Statement: Develop a smart sensing device that measures BP non-invasively and continuously. It should also differentiate between skin of an neonatal, infant, healthy mature adult or a geriatric patient. Perhaps, use AI to improve measurement or compensate for offsets in measurements of patients with stents. |
| You tube Link | <https://www.youtube.com/watch?v=AH5Xmf58xMk> |

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| Project No. | 212 |
| Company type | Industry Personnel |
| Organization | GE Healthcare |
| Problem statement title | The Right Dose for the patient |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Background: Patients are often administered controlled dose of medication or contrast media during procedures such as emergency care, medical imaging or anesthesia delivery. The accuracy of administered dose is extremely critical from the perspectives of patient safety and/or diagnostic quality of images produced during these procedures. Fulfilling dose accuracy needs accurate measurement or estimation of the body weight of the patient while positioned on a surgical table or on a patient positioner of an imaging equipment such as CT scanner, MRI scanner or an interventional X-ray system. Most of the conventional surgical tables or patient positioners do not have an integrated weight sensing mechanism to aid dose computation. In situation where there may be an integrated weight sensing, the accuracy could be severely affected due to numerous variances induced by use of bed linen, sheathes or blankets, clothing & accessories, patient immobilization supports, respiratory tubes, IV lines or catheters etc. Problem Statement: Develop an integrated weight measurement system with an accuracy better than +/- 3% and suitable for patient types ranging from neonates to obese adults (3 – 280 kg) for patient positioner used with medical imaging systems or a surgical table to enable accurately defining the dose parameters for medication or contrast media. Other desirable characteristics of such a system are patient comfort, cleanability, lower cost and reliability and MRI system compatibility. |
| You tube Link | <https://www.youtube.com/watch?v=sw8MK0lSnaE> |

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| Project No. | 213 |
| Company type | Industry Personnel |
| Organization | HCL TECHNOLOGIES LIMITED |
| Problem statement title | Person Tracking System |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Video surveillance aims to gather information, to prevent crime, protect property, person or object and to inspect the scene of crime. The participants are required to build a pipeline that acquires image from multiple CCTV cameras and carry out face detection, face recognition and tracking of selected individuals. 1.Acquisition :Multiple static CCTV cameras are considered. 2.Face detection & Recognition: detect the faces and recognize the individuals 3. Multiple Person Tracking: Out of the recognized individuals, track target individuals across multiple cameras. The pipeline must have list of recognized individuals details, from which the user can select target individuals. |
| You tube Link | <https://www.youtube.com/watch?v=n3MVAA9VGzs> |

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| Project No. | 214 |
| Company type | Industry Personnel |
| Organization | ARAI |
| Problem statement title | Ensure safe driving distance in adverse conditions |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Many of the frontal collisions on highways are due to slow response of drivers and not many systems are in place to warn the driver about an impending frontal collision. In addition to this, during adverse weather conditions the visibility gets affected, which affects the sensor and the system responses. The participants shall develop the system (architecture and software) using cost effective sensors to ensure safety of the host vehicle while driving on highways. |
| You tube Link | <https://www.youtube.com/watch?v=YvYlDlGf6QI&featur> |

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| Project No. | 215 |
| Company type | Industry Personnel |
| Organization | ARAI |
| Problem statement title | Online Prognostic System of key vehicle component |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Simple |
| Description | Accidents in heavy commercial vehicles occur mainly due to the failure of Drivetrain system, chassis, brakes and tires. To avoid breakdown of the above mentioned systems, the participants shall develop software algorithms for online prognostics to monitor the health of the above systems. The typical components that can be considered for the demonstration purposes are ‘Drive Shaft, Axle, Brakes and Tires’. |
| You tube Link | <https://www.youtube.com/watch?v=GgfkGahPlxs> |

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| Project No. | 216 |
| Company type | Industry Personnel |
| Organization | ARAI |
| Problem statement title | Performance Evaluation and Analysis of a vehicle |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Indian operation patterns and duty cycles are heterogeneous and complex and require huge experimentation to ensure durability and reliability of the vehicles. Robust methods and algorithms need to be developed to evaluate data which can be further used as input for new vehicle design and development. Participants shall use this data to come up with algorithms for post processing and further performance evaluation. Algorithms shall be generic in nature |
| You tube Link | <https://www.youtube.com/watch?v=5QVMPZwGde8> |

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| Project No. | 217 |
| Company type | Industry Personnel |
| Organization | ARAI |
| Problem statement title | Prediction of Automotive Component Failure Causes |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Metallurgical Analysis is conducted on various Automobile components to determine the probable cause of its Failure. ARAI contains extensive information about various automobile components with respect to their Metallurgical properties & also available with Micrographs. The participants shall develop software algorithms for assessment of Micrographs with view of Predicting the Probable Failure Cause of Automotive Components & the future Prospects. Analysis of Correlation & discovery of pattern |
| You tube Link | <https://www.youtube.com/watch?v=fjKz9xwB4Ak&featur> |

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| Project No. | 218 |
| Company type | Industry Personnel |
| Organization | HCL TECHNOLOGIES LIMITED |
| Problem statement title | Low cost residential flow meter |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | There is a need for strap-on low cost flow meter that can be used to meter water consumption in individual units in existing Apartments and buildings. This problem explains the need and requirements to create such a low cost flow meter. Please refer to you tube video for detail info |
| You tube Link | <https://www.youtube.com/watch?v=i_bjs3-fvpQ> |

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| Project No. | 219 |
| Company type | Industry Personnel |
| Organization | Kotak Mahindra Bank |
| Problem statement title | Multi lingual and voice based conservation interface ( not necessarily bot) |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | In everyday technological contexts, it is observed that, customers tend to engage more proficiently with a conversational user interface. Such interfaces, if smart, increases the customer satisfaction and improves the user experience. The objective is to design and develop a conversational interface that supports voice channel and accepts multilingual input. The model should leverage latest technological advancements including natural language processing, natural language generation, speech recognition and artificial intelligence. The interface should handle various banking related customer requests and extend other banking services. It should accept user’s voice input, process it and reply with appropriate voice output. The prototype can be a web interface or a mobile application interface. |
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| Project No. | 220 |
| Company type | Industry Personnel |
| Organization | Kotak Mahindra Bank |
| Problem statement title | Low cost payment terminal |
| Category | Hardware |
| Technology Bucket | Finance |
| Complexity | Complex |
| Description | Low cost payment terminal which can be used to accept ALL modes of digital payments (QR, Card, Contactless, Aadhaar) including transit payments for smart cities-India has higher penetration of phones then cards and any merchant payment solution should leverage this trend. Hence to drive Digital Transactions there is need for a payment acceptance platform that is Mobile Centric, Omnipresent, Cost Light, Secure, Network Resillient/Agnostic, Provides Instant Payments and can be Adopted at Scale by both Consumer and Merchants. Current POS terminal penetration is restricted to smaller base and there are inherent limitations which discourage mass adoption in Indian context. POS machines are becoming more advanced with Value Added Services but still the payment process has remained same and doesnt appeal to all segment of merchants especially ones which are cost sensitive and ones outside Tier-1 centers. India needs a solution that is not only cost effective but at par with convenience of Cash. It should support multiple scenarios seamlessly such as Ecommerce, Collection for small shops and high frequence-low ticket use cases such as transits. Focusing on Retail Merchants in Smart Cities, which still see a bulk of cash payments, there is a need for a low cost & multi-functional acceptance device that can support all existing Digital Payment Modes like Cards/UPI/BharatQR/Aadhaar Pay/IPG at fraction of current cost. There should be an ecosystem of players to drive the adoption at scale and to Tier-3+ centers. |
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| Project No. | 221 |
| Company type | Industry Personnel |
| Organization | MixORG |
| Problem statement title | Affordable mobile application camera system to monitor residential societies' vehicle activity |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Statement: Create an affordable solution of a mobile application and a camera system through image processing to identify and monitor vehicles entering and leaving a residential society passing through the entry/exit gate. Description: Many residential society administrations in India face an impending problem of illegal vehicle parking inside their societies and theft of the vehicles. This issue is not bounded to just vehicles, but also add to other security concerns inside the residential societies. Though there are solutions that exist in the market for monitoring through cameras and software system but are expensive and the affordability comes into the question. In this regard, we would like to have an affordable and innovative solution that caters to the Indian market. Expectation: For the team choosing this topic, we expect to have a working model (software system) of the solution wherein, when a vehicle passes through a residential society gate, it is identified as a resident / non resident vehicle and a notification to be sent to the vehicle owner and the security via a mobile application. Similarly on exit the vehicle is identified. The application may provide interesting features which improve the overall security of the resident society, convenience to residents and analytics to the security / management of the residential society. Note: For implementation students do not need to have a camera but could also rely on the pre recorded video. We will also provide at a later stage 1-2 videos to overcome the requirement of the physical camera. Evaluation criteria - Working demo : 40 points - Clean and easy to use interface: 30 points - Innovative features catering to convenience of residents and revenue generation for the application: 30 points |
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| Project No. | 222 |
| Company type | Industry Personnel |
| Organization | KPIT |
| Problem statement title | Economical and reusable Thermal Management of components in electrical transport systems. |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Simple |
| Description | There is heat generation from components and subsystems like motor, energy storage other power electronics subsystems. We need to maintain the temperatures of subsystems in optimum range by rejecting heat to environment. We are looking for smart solutions where we can effectively control the temperature of components in optimum range with reuse of the rejected heat. |
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| Project No. | 223 |
| Company type | Industry Personnel |
| Organization | Kokuyo Camlin |
| Problem statement title | Tracking Board for unsafe act |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Simple |
| Description | 1) Safety issue . Need to have common software which will check following points and generate alarms for quick action to have safe environment of factory . a) In pressure vessels (Air, hydraulic Oil , Water etc ), If pressure cross designed Limit and not stopped , need to generate alarm by dashboard and can be stopped . ( Like air compressors , Vacuum pump, Pressurized fire lines ) b) In factory , Noise level limits are defined , If that cross alarm must be generated through same dashboard c) Air monitoring for pollution inside the factory premises , can be seen into same dash board d) Electrical panels temp to be monitored and real time tracking can be seen and temp above defined limit should generate alarm . e) Excessive vibrations of Machines also to be tracked and alarm to be given . |
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| Project No. | 224 |
| Company type | Industry Personnel |
| Organization | Shantha - Sanofi |
| Problem statement title | Managing the personnel training in a simple way |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | In a GMP manufacturing organization with 2000+ employees, tracking employee training details is one of the key tasks. How to manually track the employee training details and alert the users through an excel spread sheet easily? We are in 21st Century & moving ahead with new trends of technology. Organizations need to keep their workforce up to speed with the latest trends & procedures. How to keep the skill set of the personnel as per the current requirements of GMP? |
| You tube Link | <https://www.youtube.com/watch?v=7945zoe0G04&featur> |

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| Project No. | 225 |
| Company type | Industry Personnel |
| Organization | Shantha - Sanofi |
| Problem statement title | Simplification of garment scanning |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | We have implemented RFID tags for our sterile area garments to track washing cycle. In a set of Sterile garment will have • Head Cap – 1 No. • Body wear – 1 No. • Booties – 2 Nos. We have to scan 4 times to prepare a set. We have almost 500 sets every day to be washed, means 2000 times we have to scan. Can we have some simple solution to avoid every tag scan individually? |
| You tube Link | <https://www.youtube.com/watch?v=fxoZ6f9th6o&featur> |

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| Project No. | 226 |
| Company type | Industry Personnel |
| Organization | PayTM |
| Problem statement title | Reduce the amount of push notifications require for e-commerce apps |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Developer would have to build a solution using Artificial Intelligence or some other mechanism to reduce the amount of push notifications sent by e-commerce apps. Currently push notifications are generally sent based on a fixed schedule or some trigger in most apps. This creates multiple notifications every week and irritates the user. The intent should be to only send notifications when the users intent is there to purchase a particular product. Sending push notifications or emails without any user intent to buy that category of product creates frustration to the user. So only when user has intention to buy something the notifications or emails should. The developer has to use a technical method to find that intent using big data and then send notifications or emails according to that method. |
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| Project No. | 227 |
| Company type | Industry Personnel |
| Organization | PayTM |
| Problem statement title | Using technology to create a credit profile of e-commerce customers |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | The e-commerce companies find it very difficult to profit since their are lot of return backs and cancellations in e-commerce orders. Also even when orders are properly accepted the customer may want to pay by EMI. Thus their needs to be a system to create a credit and buying profile of a customer. This has to be done in a way that it does not create privacy issue for the customer. The developer should use data from customers and try to use technologies like big data/AI/statistical analysis to create a profile of customer without compromising his or her privacy. Then based on that the system should give delivery benefits and EMI options to the user. So a customer who has negative buying profile will not get Cash on Delivery option. Similarly customers with negative credit profile will not get EMI options. |
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| Project No. | 228 |
| Company type | Industry Personnel |
| Organization | PayTM |
| Problem statement title | Reducing phishing attacks in online/mobile wallets and net banking |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Phishing attacks are becoming common. The common man is sometimes duped of hard earned saving due to phishing attacks. Specially vulnerable are old people. They are targeted for their net banking/online wallet PIN or password. The developer should design a system to solve this problem. This problem cannot be solved using only technology. Special focus will have to be put on User Experience (UX) design and User Interface (UI) design. Solutions should keep in mind old users, users who are from villages, users who are not technically savvy and kids. These are specially vulnerable groups. |
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| Project No. | 229 |
| Company type | Industry Personnel |
| Organization | Dr Reddy's Labs |
| Problem statement title | Leveraging data to solve for Non-communicable Disease diagnosis and healthcare delivery |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Background: Non-communicable disease continues to be an important public health problem in India, being responsible for a major proportion of mortality and morbidity. Demographic changes, changes in the lifestyle along with increased rates of urbanization are the major reasons responsible for the tilt towards the non-communicable diseases. In India, there is no regular system for collecting data on non-communicable diseases (NCDs) which can be said to be of adequate coverage or quality. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3481705/ While disease burden surveys from the likes of ICMR (Indian Council for Medical Research) do provide directional insights, bottom-up data is certainly more effective in making focused interventions. For instance, focused on cardio-vascular and diabetes, identification of prevalence and micro-segments of population at risk is critical to deliver care as these require specialist interventions, not easily available in the rural markets. These conditions also require the patients to be on long term care in terms of continuous parameter evaluation and management of the vital parameters. Better understanding of prevalence through early diagnosis and focused geographical/demographical views help deploy the sparse resources effectively – both by the public and private health institutions. Objective: How can a combination of UIDAI/Aadhaar, “Low fidelity high frequency” medical devices that can capture recurring diagnostic data at a high frequency come together to enable better data collection? How can advanced data analytics (ML/DL/AI) on top of this data platform help improve 10x, the diagnosis and intervention touch points for non-communicable diseases (NCD) focused on Cardio-Vascular and Diabetes, primarily in Rural/Semi-Urban environments?Guidance: • Solution should have measurable key performance indicators (KPI) • KPI should be clearly linked to the goal of improving the early diagnosis of these conditions as well as enable planners give access to the distribution of patient population • Note: Solution proposed should enable identification of patients to ensure the attributability and accuracy of the data but respect the data privacy of the patients • You might want to narrow down the problem into sub parts or address all separately. You can address one or more of the following : • Identify the diagnostic approach for common causes of diabetes and cardio-vascular diseases • Identify various common use-case data capture environments and leverage that to build data sets • ML/DL models that can creatively leverage varied data sets of demographics, climate, other conditions to progressively improve the diagnosis as well as disease distribution prediction • At least one example of the journey should be included in the solution where you provide the details of how your solution will operate/ change a day in life of a patient or a care-professional/planner • The 10 X for impact is kept as a framework so that that you don’t provide an incremental solution which cannot be scaled |
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| Project No. | 230 |
| Company type | Industry Personnel |
| Organization | Dr Reddy's Labs |
| Problem statement title | Leveraging Digital Solutions to solve for 10X growth in prescriptions |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Background: Indian market for pharmaceuticals is predominantly branded generics. Doctors write the brand name of the drug rather than the active ingredient name. (Eg. NISE instead of Nimesulide, or Crocin instead of Paracetamol). Apart from OTC (Over the Counter Drugs) a health care practitioner (Doctor) can only prescribe a medicine. Hence the end consumer is not the decision maker. To increase revenue all the pharmaceutical companies strive to get mind share of the doctor so that for a particular drug their brand is at the top of the evoked set. It is against the law to provide any direct inducement to the doctor to prescribe a certain brand. Hence, pharmaceutical companies send Medical Representatives (MR) to the doctor frequently to ensure the doctor is reminded of the brand / Brand Recall. Medical representatives also provide information to the doctors on new product launch, new packaging or other information about the brand. They also inform the doctor about the brand availability at the local pharmacy stores. There are multiple theories on why a doctor prescribes a certain brand. One theory is that doctor prescribes a brand because they trust the quality. Another theory is that they have a certain evoked set of brands and divides the prescriptions arbitrarily based on the brand that comes to their mind. Another theory is that doctor prescribes a brand because of personal working relationship or even in some cases out of sympathy due to general longer waiting time of MRs to meet him/her. Medical representative gets very small share of the doctor's time. Usually the interaction lasts from 30 seconds to 5 minutes. Medical representatives have to spend a lot of time waiting for the doctor's time or travelling from one clinic/hospital to another. Pharma companies have to employ a huge force of Medical Representatives to ensure reach to doctors. However, this is very expensive to scale up. Objective: To enable 10 X growth in prescriptions with digital technology as an enabler Guidance: • Solution should have measurable key performance indicators (KPI) • KPI should be clearly linked to the goal of generating prescriptions. • Solution should be scalable • No part of Solution should include any direct inducement to the doctor (Eg. Commission or direct material favours) • You might want to narrow down the problem into sub parts or address all separately. You can address one or more of the following : • Increasing the effectiveness of the Interaction between doctor and MR • Enabling the same MR team to reach more doctors • Enable reach to doctors without MR through digital means (Doctors not getting covered by MR visits) • At least one example of the experience journey should be provided in the solution where you provide the details of how your solution will change a day in life of the Doctor and a MR etc • The 10 X growth is kept as a framework so that that you don’t provide an incremental solution which cannot be scaled. |
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| Project No. | 231 |
| Company type | Industry Personnel |
| Organization | Marico |
| Problem statement title | Coconut to Copra Instant Yield Estimation |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | Coconut refers to coconut without husk that is normally available at Retail shops. Said coconut consists of Outer shell, Coconut meat (with 45-55% moisture) & water inside. Copra manufacturing from Coconut involves breaking of coconut, scooping and subsequent Sun Drying of coconut meat. The entire process takes around 6-7 days. Moisture of final copra (dried coconut meat) is around 5-6%. Copra Yield is defined as the amount of copra produced from 1 kg of coconut. Yield ranges from 23% to 34% and is key Parameter for defining Nut quality and Prices. (Yield many a times is referred as Outturn in coconut domain) One can estimate exact copra yield only after completion of entire drying operation. Samples getting mechanically dried instead of Sun drying can reduce the time for yield estimation but again it will still not allow Yield determination at time of Buying nuts. Also said process will be based upon sampling and subjected to friction between seller and buyer. Currently there is no way of estimating instant Yield at time of purchase. Inability to estimate the yield of copra is quite critical problem in the entire value change as either seller or Buyer suffer losses due to poor yield estimates at point of sale. What is needed - The need of the hour is a sampling / continuous testing machine (Non Invasive type) which can accurately estimate the yield of the coconut at point of purchase. |
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| Project No. | 232 |
| Company type | Industry Personnel |
| Organization | Marico |
| Problem statement title | Coconut crop Harvest mechanization for reducing Harvest cost |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | More than 1/3rd of the coconut farm cost consists of labour expenses. The major heads for the same are harvesting charges. Harvesting requires skilled set of labours and shortage of labour leads to higher cost and delay in harvesting. Also the number of trees that can be harvested manually remains a constraint. Previous innovations in this field like the coconut climbing machine has had limited success because the speed of operation becomes slow and there is unwillingness of the farmer to be a climber himself. Hence the problem remains unsolved. What is needed: A harvesting machine/mechanization which can be directed / controlled easily from ground without needing farmer / labour to climb the tree. Expectations from said mechanization - 1. Accurate cutting and harvesting ability. 2. Cost benefit vs Manual Climbing 3. Low effort required to activate and use |
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| Project No. | 233 |
| Company type | Industry Personnel |
| Organization | Marico |
| Problem statement title | Ultra-Portable Cosmetic Heating Solution |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Heating in personal care and beauty solutions is a unique vector which is used for up regulation of various benefits like better penetration or absorption, easy spreadability, relieving senses, enhancing blood circulation etc. Heat available naturally is much diffused whereas direct or indirect heating modes are inconvenient & expensive. For instance, hot oil massage is a common Indian Consumer practice. In order to heat the oil, common practice is heating the bowl over heater (direct mode) or in hot water (indirect mode); both of which are messy and inconvenient. Potential innovations in this field suffer from cost upcharge due to sophisticated heating elements and safety concerns. There is a need for low cost heating solution for single use product amount (say 2-10 gm) to warm temperature (35-45oC). What is needed: An ultra-portable and low-cost heating solution for single use amount of cosmetic product with following expectations- - Cost <15 INR per piece - Temperature of product to rise upto 45oC - Utilization of resources available at home without adding any inconvenience |
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| Project No. | 234 |
| Company type | Industry Personnel |
| Organization | Marico |
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| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
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| Project No. | 235 |
| Company type | Industry Personnel |
| Organization | Marico |
| Problem statement title | Body Odor Detection attachment for Smartphone |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Our nose is so used to our own body odor that we can’t smell our own sweat. In order to avoid getting pointed out by others, the solution can be a portable sensor which can detect and convey the state of body odor and recommend corrective action. Sensors are available for detection of various volatile organic compounds (VOCs). Miniaturization of the sensors and fitting it as smartphone attachment- using any available mobile ports- for detection of body odor and algorithm to recommend the corrective action. What is needed: An ultra-portable and low-cost body odor measurement probe attachment for smartphone and accompanying application with following expectations- - Low Cost Attachment - Differentiate intensity and character of odor detected - Differentiate between fragrance and body odor (both are volatile compounds |
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| Project No. | 236 |
| Company type | Industry Personnel |
| Organization | SkipperSeil |
| Problem statement title | Health Index of Power Transformer Fleet in Transmission Utility. |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Power Transformer is an important and vital equipment for Power Supply System in a transmission grid. It’s back -down leads to commercial losses and inconvenience to the public. • Today, we have a vast transmission network with lakhs of power transformer in the grid. The Power transformer fleet is maintained by each state utility in its domain. The failure rate of transformer has been a matter of concern and it is attributable mainly to the maintenance of the transformer. • There are good practices of maintenance- both preventive and predictive. Predictive maintenance has gone far ahead in terms of knowledge and technology today in the area of power transformer and we have condition monitoring equipment, both off-line and on-line. • It is proved over a period of time that these condition monitoring predictive maintenance has saved million of Rupees for utility and successfully provided uninterrupted power supply. • Inspite of having advance off-line and on-line condition monitoring, it is quite challenging for utility to precisely look at each and every transformer. In a way, it is manual assessment. Utility is like to miss the right time intervention to take corrective action based on condition monitoring data recorded in the off-line and on-line monitoring equipment. With above background, following software is required:- Like a health check in human being on regular basis, one can know the health parameters and recommend the required medicine and remedial actions to overcome the development and worsening of health. The similar concept is proposed for power transformer fleet. The recorded off-line and on-line condition monitoring parameters will be the base to work-out the health index of each transformer. It will be done by assigning a grade depending on the impact of each condition monitoring parameters. The final health index value of each transformer has to be worked out based on all conditions monitoring attributes. We need to develop a software which will have transformer fleet data base and give a health index of each transformer based on off-line and on-line condition monitoring attributes fed to the software on regular basis. Benefits: 1) Utility will be able to predict the pre-matured failure of transformer and take corrective action 2) Plan predictive maintenance investment based on health index of each transformer. 3) In totality, it will ensure uninterrupted power supply and save millions of Rupees against replacement of failed transformers. |
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| Project No. | 237 |
| Company type | Industry Personnel |
| Organization | Plezmo |
| Problem statement title | Create an Augmented Reality based 3D Build and Assembly Instruction App for Cardboard Models |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Many games, furniture items or construction kits come with build instructions which are usually represented in 2 dimensional print material or PDFs for consumption via computers. Depending on the nature of the item being built, 2 dimensional instructions are sometimes insufficient. At Plezmo, we develop products to teach computer science, design thinking and IoT fundamentals to School and College students. Part of our product line is a set of models which the users construct from die-cut cardboard sheets. We would like the users to be able to scan a QR code on these cardboard sheets using a phone/tablet App which will present user with Augmented Reality build and assembly instructions of all the models that can be built using that cardboard sheet overlayed on top of the cardboard itself. Users should be able to click the app for next and previous buttons which will allow them to go back and forth between various intermediate steps of assembly. The AR data should be fetched from a cloud backend. The cloud backend should have ability to upload new 3D data for different models along with the intermediate steps etc. |
| You tube Link | <https://www.youtube.com/watch?v=8E5nxXes69s> |

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| Project No. | 238 |
| Company type | Industry Personnel |
| Organization | Plezmo |
| Problem statement title | Create a Visually programmable PLC controller using Bluetooth Automation I/O Profile |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Majority of the factory automation today is done using isolated PLC controllers which can control components of a single sub-system (CNC, Pump, Boiler etc) at a time. These need to be re-programmed as per the job running on the factory floor since the same plant is used to manufacture different products. The cycle time between these changes is quite large and is prone to errors (since one of the machines may be incorrectly programmed) and it's difficult to do a factory wide what-if analysis of such changes. The challenge is to develop an IoT platform that can allow simple Visual Programming using open source libraries like Google Blockly to specify new program to be done across all different PLC controllers. On the hardware side, the PLC controllers should be bluetooth connected and running the Bluetooth Automation I/O profile/service. There should be a central server which can communicate with all the PLC controllers over bluetooth. User should be able to specify new programms using visual programming (e.g. When the boiler PLC controller Analog input 1 detects value > 100 then turn the motor connected to output 2 of the Cooling system PLC controller etc). When the program is done, it should be possible for the user to execute this program from the central server which acts as a co-ordinator executing this logic across all PLC controllers over bluetooth by reading and writing corresponding Bluetooth low energy characteristics as specified by Automation I/O profile. |
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| Project No. | 239 |
| Company type | Industry Personnel |
| Organization | SkipperSeil |
| Problem statement title | Wind and Solar energy prediction |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Traditional (conventional) sources of power generation are Thermal (Coal), Hydro, Gas and Nuclear, but they are depleting and causing carbon emission. Many countries are taking harsh decision to close down thermal and nuclear. An alternative source, catching the attention of everyone is renewable energy from Solar and wind, which require no fuel and abundantly available according to geographical location. However, it has its own characteristic and throw upon challenges to integrate into transmission and distribution grid. Solar Energy 1. Solar Energy is available only during daytime and quantum of power varies according to time in bell shape form. This bell shape will change according to season. 2. Solar Energy is variable in the cloudy weather conditions. Wind Energy 1. Though available throughout the year. Wind potential varies location to location (that’s why installed in specific areas mostly in remote locations) and season to season. 2. Wind is variable, intermittent and unpredictable during 24 hrs. of the day. Location wise wind potential makes the task of transmission and distribution utility/grid operation more difficult in absence of local consumption as well as adequate network. Wind Energy is at peak during monsoon. This is the season when power demand is low. Grid operation has a challenge of handling the excess renewal energy. Grid operation is planned day ahead by taking supply (generator) and demand (utility) commitment. Grid operator is bound to control supply-demand balance to maintain frequency, but it becomes challenging when wind energy is accounted as part of supply in the day ahead planning due to variable and intermittent nature of wind. Grid operator is compelled to back-down conventional sources of generation to minimum level (inefficient operation) for load balancing. With above background of renewable energy generation, there is need of software solution/modes in the hands of grid operator to predict solar and wind energy generation day ahead as well as during grid operation on hourly basis to guide them for load management. Benefits: Right solar and wind energy prediction model will enable grid operator to plan dispatches and manage load balancing and efficient operation of power plant. |
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| Project No. | 240 |
| Company type | Industry Personnel |
| Organization | Goa Shipyard Ltd |
| Problem statement title | Mail Dashboard |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | Outgoing Mails & Incoming mails to a particular Mail Id. Within this segregation should be made between internal domain & external domain. Day/Week/Month/Year Wise reports should be available. Top 10 Mail Id’s by No. Of Mail received / sent, Size of mail Boxes, Total size of Attachments sent / received should be made available, Mail Boxes being archived daily, Mail Boxes not being Archived etc. Many more Criteria’s for preparing a Mail Dashboard can be thought of. Dashboard should not be particular Mail Specific. It should work for Lotus Domino, Exchange etc. |
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| Project No. | 241 |
| Company type | Industry Personnel |
| Organization | Goa Shipyard Ltd |
| Problem statement title | Knowledge Management Portal |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Requirement of a Joint Portal for Knowledge Management between DPSU’s. With a near common Product Mix, Production Methods, it becomes imperative that knowledge gained in sorting out different defects, coming up with new ideas is shared and utilized between Defence PSU’s. While developing a mechanism for this knowledge sharing, adherence to basic principles of ease of use, accessibility from different companies, where to host, maintenance of the site and who would be the Portal Administrator, Catching comments about the Knowledge piece posted, Giving of points as rewards (Scale 1-10) for any knowledge piece should be thought upon and included in scope. |
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| Project No. | 242 |
| Company type | Industry Personnel |
| Organization | Goa Shipyard Ltd |
| Problem statement title | MD Message Online |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | MD’s message online to the Company’s Workforce. Without movement of the workforce in a Auditorium, Workforce can hear what is MD’s message to the workforce and they should be able to ask their questions / queries too from their work location. Session should be completely interactive after the address is over and implemented from PC’s kept at different locations. How can this be implemented. |
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| Project No. | 243 |
| Company type | Industry Personnel |
| Organization | Goa Shipyard Ltd |
| Problem statement title | Tracking Of Preventive Maintenance |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Tracking of Preventive Maintenance of machines, systems, sub-systems, tools & generation of alerts at 6 months prior for AMC renewal & 3 months for any PM. Grouping of related items for a single AMC / Single PM to a supplier. Scheduling of the PM so as not to hurt actual production time lines. Having Analytics built in for spares upkeep, Proper scheduling etc should be the outcome. |
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| Project No. | 244 |
| Company type | Industry Personnel |
| Organization | Goonj |
| Problem statement title | Assess impact on environment, of the material re-used by Goonj, had it gone into dump/landfill. |
| Category | Software |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | BRIEF on GOONJ:- its a 19+ years old non-profit organization working on utilizing discarded urban material as a tool for development. We are a force of 900 people with work spread across 23 states in India. Goonj has won many National and International awards including the Ramon Magsaysay award 2015 to our founder Anshu Gupta. The work has touched upon some difficult rural development issues like water, sanitation, infrastructure, agriculture, migration apart from sustained work in disaster-hit communities. Goonj receives tonnes of material annually from urban population. This material goes through storing, sorting and processing. Sorted material is converted into kits of reusable material. Goonj engages with local communities in far flung areas in rural India to get development work done in their community using their own local resources and manpower. Material packed in kits is used as a parallel currency and is given out as a reward for their efforts. Do visit our website www.goonj.org to know more. PROBLEM STATEMENT - IMPACT ASSESSMENT ON ENVIRONMENT :--. Goonj deals with 3000+ tones (and increasing) of material (trash) annually. Material constitutes of apparel, cloth, kitchen utensils & appliances, electronic items, toys, stationery, books, footwear, furniture and many other household items. Goonj up-cycles the material and uses as parallel currency to get development work done in rural India. Up-cycling and extending the life of any material saves it from being dumped into landfill. PROVIDE A SOLUTION to measure quantifiable environmental impact, of various types of material, if it had reached garbage/landfill. Use standard global environmental parameters for different types of material to derive at an impact. |
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| Project No. | 245 |
| Company type | Industry Personnel |
| Organization | Goonj |
| Problem statement title | Derive at a Productivity Efficiency |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | PROBLEM : PRODUCTIVITY EFFICIENCY - Goonj team operates from 8 offices Pan India. Obtaining global productivity for any task gets challenging and is a tedious exercise. For a task, number of people is involved in its completion. For eg. Sorting of material to form a distributable kit involves number of people, making of a school bag from re-usable material involves different set of people with requisite skills sets. Give a solution to get productivity for different types of tasks. System should alert on the areas where there are bottlenecks or a delay impacting productivity. This would enable the organization to bring in continuous improvement in productivity and thus help reach more material for rural development. |
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| Project No. | 246 |
| Company type | Industry Personnel |
| Organization | Garden Reach Shipbuilders |
| Problem statement title | Insulation issue in Auxiliary and Deck machinery motors in naval ships |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Insulation resistance is one of the critical readings of marine electrical equipment systems and serves as the best guide to indicate the health of the electrical machinery. As the name suggests, the insulation resistance is the ability of the insulation material to resist the current flow. With time, the insulation begins to age, and it causes deterioration in the performance of the insulation. Harsh operating environments where the electrical insulation is exposed to extreme operating temperatures, moisture, and chemical contamination, as experienced on a ship, will accelerate the deterioration process. It's extremely critical to always know the electrical condition(IR) of the insulation in ship's electrical equipment at all times to avoid any accident such as electrical shock, fire, short circuit etc. Scope: New design of motor shell body and rubber gasket of motor Junction Box required to maintain IP protection of motor for long duration. |
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| Project No. | 247 |
| Company type | Industry Personnel |
| Organization | Garden Reach Shipbuilders |
| Problem statement title | Repeated failure of main Engine Control systems Cards due to short circuit or less insulation values |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | During construction phase of ships or ship in service there are repeated failures of Main Engine Control system cards due to Short circuit or low insulations values results into malfunction of the control system. Main engine system need to be shut down for repairing or replacing for cards which takes time and cost. Scope: There is an integrated system required with such mechanism which can monitor insulation of main propulsion control system on a real time basis to help the crew for taking necessary steps for avoiding major hazards. |
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| Project No. | 248 |
| Company type | Industry Personnel |
| Organization | Garden Reach Shipbuilders |
| Problem statement title | Autonomous navigation system for pilotless manoeuvring of vessel through restricted waters. |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Simple |
| Description | During entry/exit of a vessel at harbour or during navigation through restricted waters, a team of experienced personals are deputed to handle the critical job. Any small human mistake may lead to a disastrous maritime accident as many a times depicted in maritime history. To prevent this an autonomous navigation system may be created for vessels navigation through restricted waters. At land, the technology of driverless car have been introduced which can handle itself in traffic, narrow roads and consists of automatic guidance system. Scope: A same concept can be utilized in naval scenario where in the future the ships can enter or leave harbour / navigate through restricted waters autonomously at higher speed and with zero error, even in relatively uncharted waters. |
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| Project No. | 249 |
| Company type | Industry Personnel |
| Organization | deAsra |
| Problem statement title | Gaming built around business simulation |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | A gaming application required which will create a simulated business environment. This will be played along with other contestants. Some real life scenarios, decision making, impact of the decisions is imbedded into the application. Also, responses of various other contestants to similar situations can be shown as a learning. This can also gauge their appetite for risk and expansion. |
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| Project No. | 250 |
| Company type | Industry Personnel |
| Organization | deAsra |
| Problem statement title | An Online video directory for entrepreneurs |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | A business directory in the form of short videos tagged with the name of the entrepreneur, his business, his USP should be available for people to watch and derive inputs from / or connect. An application to enable people to apply for uploading videos created by them should be available. This application should check first level eligibility for uploading and also have a search and index mechanism, so people can search videos based on the sectors of their interest. |
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| Project No. | 251 |
| Company type | Industry Personnel |
| Organization | deAsra |
| Problem statement title | Online interactive entrepreneur clubs |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | there are a number of entrepreneur clubs operating in different parts of the city/state. They are in the form of a gathering of people where people connect and network for their own business interests. An application is required through which an online forum is created for these entrepreneurs. This application should enable an entrepreneur to register himself giving details like – Who I am, what do I do, and, What I can give/supply. This application should further match entrepreneurs depending on their interests and “asks” and “haves” automatically. This data will generate fruitful connections for both. |
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| Project No. | 252 |
| Company type | Industry Personnel |
| Organization | GoldmanSachs |
| Problem statement title | Smart Traffic Lights using CCTV |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | Use CCTV cameras installed on junctions to figure out which side has maximum traffic and accordingly adjust duration of red/green light automatically. |
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| Project No. | 253 |
| Company type | Industry Personnel |
| Organization | GoldmanSachs |
| Problem statement title | Shared Roof Top Rain Water Harvesting |
| Category | Software |
| Technology Bucket | Clean Water |
| Complexity | Complicated |
| Description | Currently, for roof top rain water harvesting, people install water storage tanks individually per building/apartment which results in high cost for individuals/groups. No mechanism/application is available to find out where such installations are beneficial, which installations can share storage tanks and what would be the required capacity of these shared tanks. Given map and housing data, optimize the location of centralized tanks for rain-water harvesting.The following data should be sufficient to design and implement a model to solve the problem: 1. Estimating rainwater harvesting capacity: a. Rainfall estimation: Historical data from rainfall gauges at different places in the target area. b. Catchment area: Masterplan of the city to estimate the catchment area available, e.g open areas like rooftop, courtyard, etc. 2. Optimizing Water tank placement: a. Water demand/Use capacity: Water supply data can be used to estimate the consumption of harvested rainwater for non-drinking purposes b. Underground map: Underground map with stability study to identify locations where the shared tank can be built The system should provide the following output from its analysis: 1. Plan for laying out the underground tanks with input and output points defined 2. Cost benefit analysis justifying the plan 3. Plan for distribution of build and maintenance cost of a tank for the parties involved |
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| Project No. | 254 |
| Company type | Industry Personnel |
| Organization | GoldmanSachs |
| Problem statement title | Transport Management System for Intra-City travel |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Public commute such as buses and metro don't have useful information. For example, if in-city buses had a system with information about the exact number of standing and sitting seats in the next metro or bus, then it would make using public transport very easy and amiable for citizens. Assuming sensor data for seating is available on each vehicle and the vehicles can transmit data between each other, devise an algorithm that can tell users which vehicle to take. Devise relevant analytics to help the authorities realize whether to increase the frequency/passenger capacity of bus/metro in real-time at certain stops could also be included in the system. Inputs to the application: - Static Input (doesn’t change frequently) o Route names of DTC buses and their stoppage on that route o Bus Make (Number of standing/sitting seats) - Dynamic Input (changes real-time) o For every stop – no. of passengers boarded and de-boarded (Can be inputted by the bus staff) Outputs of the application: Real-time information about the bus with its seat availability information (number of vacant sitting/standing seats). The application is expected to show the bus going on a static pre-defined route with number of standing/sitting seats. Future Optimizations: - User information like their boarding point and destination can be inputted - The number of boarding/deboarding passengers can also be inputted by beacons/RFID tags/thermal measure installed on the bus - Destination info about each passenger boarding the bus o so that a bus doesn’t have to stop at every bus stop and a user can determine if the bus will reach their destination in the shortest possible time STATIC INPUT: ROUTES: This table shows 2 of all the available routes in the city. 100UP 100DOWN STOP 1 Kendriya Terminal YMCA STOP 1 STOP 2 North Avenue Gurudwara Bangla Shahib STOP 2 STOP 3 RML Hospital RML Hospital STOP 3 STOP 4 Gurudwara Bangla Shahib North Avenue STOP 4 STOP 5 YMCA Kendriya Terminal STOP 5 BUS MAKE: Following shows 2 types of all available buses A -> 15 Standing Seats, 10 Sitting Seas B -> 18 Standing Seats, 15 Sitting Seats DYNAMIC INPUT: Based on the input done by the driver, every bus has a last stop & available seats. Input will be number of passengers boarded and de-boarded Boarded : 5 De-boarded: 3 OUTPUT: The User will input his/her pre-defined route in the app and his boarding point. Based on location of all the buses which have crossed the last stop in that route, it will show the number available seats assuming that sitting seats are taken before the standing seats. 100UP Available Standing/Sitting Seats 100DOWN Available Standing/Sitting Seats STOP 1 Kendriya Terminal 10 Standing, 2 Sitting YMCA 15 Standing, 10 Sitting STOP 2 North Avenue 8 Standing, 2 Sitting Gurudwara Bangla Shahib 9 Standing, 7 Sitting STOP 3 RML Hospital 9 Standing, 3 Sitting RML Hospital 13 Standing, 6 Sitting STOP 4 Gurudwara Bangla Shahib 7 Standing, 5 Sitting North Avenue 10 Standing, 3 Sitting STOP 5 YMCA 15 Standing, 10 Sitting Kendriya Terminal 18 Standing, 13 Sitting |
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| Project No. | 255 |
| Company type | Industry Personnel |
| Organization | Bajaj Electricals Limited |
| Problem statement title | Water Efficient – Air Cooler |
| Category | Hardware |
| Technology Bucket | Sustainable Environment |
| Complexity | Complex |
| Description | An average desert cooler consumes 50-60 liters of water in a days use, which is very critical for dry & arid regions, facing water scarcity. An effective principal design of a cooler can be innovated to reduce the use of water by at-least 50%, without impacting the cooling efficiency. This will have huge positive impact on saving of water and reduction in overall weight & size of cooler body, hence making it cost effective. |
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| Project No. | 256 |
| Company type | Industry Personnel |
| Organization | Bajaj Electricals Limited |
| Problem statement title | Multipan // NEKA |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Simple |
| Description | In today’s fast pace life, people are always running short of time in metros & big cities. Time is usually carved out of “food” (eating fast, packaged food, skipping breakfast etc). in the mornings there is no time to prepare a quick breakfast, or when you come back from work late evenings not enough time & energy even to fix a small meal like a pan cake / veggies. Solution desired: A mulitpan ( SUPER PAN) which can cook multiple dishes at one time & comes with compartments / grill which can be adjustable depending on the size. It can be used as a single size pan or 2/3/4 different items can be cooked in the same pan. The pan has to distribute even heat to all compartments while cooking & comes with a handle |
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| Project No. | 257 |
| Company type | Industry Personnel |
| Organization | Bajaj Electricals Limited |
| Problem statement title | To have Self Charged Fans - Cost effective , Energy saving and very useful for end user // FAN |
| Category | Hardware |
| Technology Bucket | Sustainable Environment |
| Complexity | Simple |
| Description | Fans are used across regions ( Urban / Rural ) and considering rural mkt penetration is still relatively low where power problems are still there , we can think of Fan which can store energy and which can be useful either in (a) no power condition or (b) can be used to use stored energy for some other application requiring energy. This will be cost effective / energy saver for end user point of view |
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| Project No. | 258 |
| Company type | Industry Personnel |
| Organization | Goonj |
| Problem statement title | Mgmt of material during Disaster- receipt, availability, movement and its receipt to the last person |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | One of the initiative of Goonj is to works with people and for people in the regions devastated by any sort of disasters - floods, earthquake, landslides, cloud burst, drought, winters, cyclones, Tunami etc. Our involvement is in 1) providing relief material in the initial phase 2) providing rehabilitation material to those whose livelihood is severed for eg giving sewing kit (incl machine) to a tailor to restart the livelihood, basic utensils and raw material to someone whose eatery is destroyed and likewise. Our centers all over India, run collection drives for material required as per the type of disaster, regional and local culture. Material need, availability, movement, receipt to the last person becomes quite tedious to maintain. Give us a SOLUTION - to maintain and know the exact material available at each center, what has been dispatched against the demand, record/tally material reached the last location vis-a-vis the dispatch. Account for the material handed over for relief, development activities to the last person at the disaster location. Goonj team in remotest of areas should be able to use the application on the hand held device in online or offline mode. Drill down Dashboards to bring bring in efficiently in operations. So that Goonj team Pan India is updated situation across all Goonj centers. |
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| Project No. | 259 |
| Company type | Industry Personnel |
| Organization | Mahindra Electric |
| Problem statement title | 1. Intelligent Range Estimator 2. EV Smart Charging App 3. Universal EV Charging Adaptor |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | 1. Intelligent Range Estimator with Real Time Traffic Information Description: In case of EV, the range of the vehicle is the most important and critical information for the customer, which is influenced by the various factors like driving & usage patterns, operating environment and traffic conditions. By utilizing the real time traffic information, drive profile, and environmental conditions, an accurate prediction of algorithm to be developed to address the range anxiety. 2. Smart Charging App for EV Description: The major challenge of Indian EV customers is the lack of Charging Infrastructure and its integration into a common App. Smart Charging App developed on to a smart phone either using Android or IOS is to automatically identify the utility provider (charging station) along with rate cards within the specified zone. This is to reduce the wait time for EV charging by reserving the slot in advance. It is also used as a secured payment gateway. 3. Universal EV Charging Adaptor Description: Around the globe there are multiple charging protocols and standards followed for EV charging. CHAdeMO, IEC CCS, Bharat Charge Protocol-BCP and GBT are the few dominant fast charging systems. They are not interoperable. The objective of this project shall be to develop a universal EV charge hardware to be used with a vehicle having any of the referred standards. Charge the vehicle having any charging communication protocol. |
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| Project No. | 260 |
| Company type | Industry Personnel |
| Organization | BEML |
| Problem statement title | Variable Speed Transmission Device for Mechanical Power Train |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Majority of the mobile machinery used in Road and Off Road applications have a mechanical power train transmitting power from engine to wheels or track. Mechanical power train typically consists of mail clutch / torque converter, gear box, differential, final drive. The gap between the torque and speed required at the wheels vs the torque and speed generated by the engine is bridged by the elements of power train. Power train components occupy volume inside the vehicle and also contribute for the weight while the transmission efficiency impacts the overall fuel efficiency of the vehicle. Power is drawn from the engine to drive the fan for cooling the heat generated in engine, transmission and hydraulic system, etc. Innovative power train concepts which can facilitate power transmission in heavy machinery like mining dump trucks are being solicited. The project is to propose alternative drive train concept for BEML make 100ton dump truck. The prime mover continues to be Engine and innovative solution is being looked at for the power train. Alternative concept should meet or exceed the drive performance requirements of the current power train while innovatively be able to reduce weight / volume and offer enhanced efficiency. |
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| Project No. | 261 |
| Company type | Industry Personnel |
| Organization | Bridgestone |
| Problem statement title | utomation in Tire Visual Inspection |
| Category | Software |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | Inspection Process:- 1. Qualified Inspector performs the visual inspection of each tire for checking defects. (> 100 types of defects). He confirms appearance Quality of the tire based on Global Standards. Inspection time of tire (inside and outside area) is around 32-37 sec (based on the tire size). Problem Challenge:- Manual Inspection depends on Inspector 's skill and there are chances of missing defects. Solution Required:- Automated System in which Tyre is scanned by an artificial Eye (Camera). After scanning, Output will be compared with the defect specifications and judgement of OK /NG Tires will be done. |
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| Project No. | 262 |
| Company type | Industry Personnel |
| Organization | Bridgestone |
| Problem statement title | Find Optimised pattern for arranging the tyres in a truck |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Problem Statement: Variation in loading pattern causing under utilization of vehicle capacity. lack of compatibility of load plan with vehicle capacity causing changes in load. Solution Required: Need to determine the compatibility of a load plan with a vehicle in optimized manner so as to accommodate maximum tyres with vehicle constraints (Weight & Volume). Results can advice under or over Utilization of available space. Flexibility in planning to accommodate variation in vehicle dimensions / Chimney space etc. Accommodate various loading patterns – Horizontal / vertical / cross loading. Determine the optimal loading pattern with sequence. |
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| Project No. | 263 |
| Company type | Industry Personnel |
| Organization | BEML |
| Problem statement title | Electric Drive System for Excavators for Inner City Applications |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Electric Drive Systems are being adopted on Hydraulic Excavators which are typically powered by Diesel Engine and power is transmitted through hydraulics. This is specially relevant in view of zero tolerance for emissions while working in city limits. Electric Drive Excavator aims at eliminating the diesel engine and will be driven by electric motor. BEML make 7.5 tons class hydraulic excavator to be bench marked for proposing the electric drive concept. The excavator should be capable of working with or without a trailing power cable and should be capable of continuous operation for four hours without getting charged. |
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| Project No. | 264 |
| Company type | Industry Personnel |
| Organization | BEML |
| Problem statement title | Transfer of data across two separate networks without violating cyber security |
| Category | Hardware |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | An app to be developed to transfer data between two networks (Intranet & Internet) which are physically separated. Even though the concept secures maximum security for local network in terms of data security, there are instances where data to be transferred to and from in certain applications becomes impossible in separate networks. |
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| Project No. | 265 |
| Company type | Industry Personnel |
| Organization | Bridgestone |
| Problem statement title | Tyre Pressure Monitoring |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | Challenge to monitor the tyre inflation pressure. Large fleets having >100 vehicles extremely difficult to manage tyre maintenance/labor cost. Solution required:- Automotive sensors showing real time inflation pressure through digital platform. |
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| Project No. | 266 |
| Company type | Industry Personnel |
| Organization | BEML |
| Problem statement title | Knowledge based Web App for eProcurement SRM (Supplier Relationship Management) |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | A web based app to tutor suppliers on how to use SRM application to facilitate the suppliers to participate in etendering. Presently suppliers are calling the help desk while submitting tenders. To eliminate this and to provide higher efficiency, a package to be developed which will operate in desktops,. laptops, mobiles to facilitate suppliers to undergo self learning process before participating in tender without contacting on a personal basis. |
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| Project No. | 267 |
| Company type | Industry Personnel |
| Organization | BEML |
| Problem statement title | Automatic Active Server Communication Alerts |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | When any of the server is down or if there is a network breakdown, it is difficult for the in-charge to know it on time unless communicated by the user. to overcome this problem, a facility to be developed to send alert through SMS when there is a server breakdown or a network failure. To develop a web based app to facilitate the person in-charge to get to know the status of servers and the link between the servers which are interlinked. |
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| Project No. | 268 |
| Company type | Industry Personnel |
| Organization | Growtech Innovations |
| Problem statement title | Monitoring input water quality and output water quality through smart sensing in Home water purifier |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Simple |
| Description | 1. Low cost smart TDS sensing to be incorporated at water source level and water output level, 2. Solution should work for retrofit for existing above water purifier as well as nwe home water purifier, 3. IOT based smart solution with android app for end consumer and home water purifier service provider, 4. Give solution should be easy to integrate home water purifier like plug and play, 5. Cost of this system should be affordable for end consumer and preferably integrated into the home water purifier service provider, 6. When moving from one location to another location, if the input water quality is changing then end consumer and home water purifier service provider should be alerted on the same. |
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| Project No. | 269 |
| Company type | Industry Personnel |
| Organization | Flucon |
| Problem statement title | Solar operated portable water purifier |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | The Unit to be designed on "Evaporation and Condensation" principal, no electricity. Input water can any water from sea or pond Desired output is pottable water. In short Any water>Processing unit>pottable water |
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| Project No. | 270 |
| Company type | Industry Personnel |
| Organization | Flucon |
| Problem statement title | High Impact Low cost Well-being solution |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Develop a solution to improve health-care and wellness for masses of India. Most disorders are easily treatable however communicating correctly can be a problem because of languages and cultures. Rural people struggle to communicate their symptoms and doctors fear they may be missing vital information. There are many apps made to address this issue. But in place of imposing a wholly new arrangement, the student team is expected to begin developing a solution that identifies and supports prevailing workfolks that will also overcome time, language and cultural barriers in doctor-patient interactions and improve overall medical care to ensure wellness. |
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| Project No. | 271 |
| Company type | Industry Personnel |
| Organization | Flucon |
| Problem statement title | Clubbing College projects across India |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | The Problem: Students working in isolation at different colleges and many a time on the same subject. Currently, there is no single effectively POPULAR working platform to connect students and faculty all over India. Solution: Develop a platform with POTENTIAL TO QUICKLY BECOME POPULAR amongst students and faculty to overcome the issue so that the students can upload their projects, share difficulties, help one another and share ideas. STUDENT TEAMS ARE NOT JUST EXPECTED TO BUILD ONLY A PORTAL BUT TO THINK AND IMPLEMENT IT IN A WAY THAT THE POPULARITY AND USE WOULD BE ALMOST GUARANTEED. It is expected that besides making a platform the team demonstrates effective efforts to ensure that their project will be PUT TO USE by students all across India. |
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| Project No. | 272 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Bed management optimization |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Bed management optimization is critical for efficient functioning of hospitals especially for larger tertiary and quaternary care hospitals. poor bed management can lead to a myriad of problems like increased waiting time for patients, underutilized operation theatres, overcrowded ERs. The need for automated bed management is the need of the hour. |
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| Project No. | 273 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Increase clinician-patient face time |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Need to increase face time between clinicians and parents. Clinicians spend considerable amount of time capturing patient information in hospital softwares. Need a technical solution like speech to text option. |
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| Project No. | 274 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Confidentiality of patient medical records |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Simple |
| Description | Confidentiality of patient medical records is of utmost importance. Access to patient medical records in hospital softwares should be with the treating/admitting clinician and the team. Access to medical records should not be given to everyone in the hospital network. |
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| Project No. | 275 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Early prediction of lifestyle diseases |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | How can we predict the likelihood of lifestyle diseases early to enable preventive healthcare. This can reduce the cost of treatment significantly. Potential solution: using detailed demographic and vital stats about people who have a particular disease and those who dont, technology companies like Google can create machine learning models to predict specific diseases in an individual during physical checkups. |
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| Project No. | 276 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Diagnosis of acute diseases in villages and smaller towns using AI |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Supply of doctors is limited in India especially in smaller towns and villages making provision of healthcare difficult to a large number of people. Telemedicine and other solutions in the past have also struggled to scale up due to this problem. Now in the age of digital assistants like Google and Alexa, can we create artificial intelligence based "doctor" that can diagnose everyday acute diseases like common cold, flu, etc, based on simple questions? |
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| Project No. | 277 |
| Company type | Industry Personnel |
| Organization | Max Healthcare |
| Problem statement title | Data collection for machine learning models to work using technology |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | For machine learning models to work we needs large amounts of trusted patient data on symptoms of various diseases which can help in diagnosis. How can we make collection of this data easy using technology. |
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| Project No. | 278 |
| Company type | Industry Personnel |
| Organization | Harman |
| Problem statement title | REALTIME ACCENT TRANSLATION |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | Conference calls have become order of the day. Participants attend the conference calls from various locations and nationalities and speak the language differently. This causes hurdles in ability to understand and also how quickly a thought is communicated. This problem is to develop a real time accent translation system based on the recipients' and deliverer's accents. The idea is to achieve far better understanding during conference calls, which will make the communication far more effective |
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| Project No. | 279 |
| Company type | Industry Personnel |
| Organization | Harman |
| Problem statement title | USE OF VOICE ASSISTANT |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | The Rural population in India does not have good access to healthcare education . The way voice assistants have helped the urban and western countries population can be replicated in rural India as well if the localization of assistance happens for healthcare education. We will define specific use case for Indian context. E.g. Rural Indian population needs preventing the onset of chronic conditions such as heart disease, diabetes, or monitoring the journey of expectant mothers and babies from physical and mental health perspective. Providing advice for such population on food to eat before and after child birth, right medication, good baby care, right physical recovery advice to mothers etc. Local food recommendations based on the location of individuals considering that there is food and eating habits are different in different regions. It also changes based on season and local customs. This will help in guiding maximum population to be able to follow such an advice or guidance. The focus will be on preventing the conditions and monitoring of the chronic conditions to help keep most of the population healthy and fit. |
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| Project No. | 280 |
| Company type | Industry Personnel |
| Organization | Harman |
| Problem statement title | OPTIMIZING WATER USAGE AND YIELD IMPROVEMENT |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | To have maximum yield, there is a need for optimum irrigation. The need of water depends on soil type, crop type, and other parameters. Currently irrigation happens based on human inspection and does not take into account various parameters which make it optimal. Parameters such as soil moisture, crop type, seasons weather forecast, can be measured and well used in optimizing water delivery as well as biological micro-nutrients in some form. Using historical / agricultural data will help further in providing real time irrigation requirement. Thus the water delivery can be controlled. This will ensure optimal usage of water with improved yield. This technique can be specifically useful for poly-houses. References: https://www.israel21c.org/5-israeli-precision-ag-technologies-making-farms-smarter/; https://www.postscapes.com/smart-agriculture/; https://www.researchgate.net/publication/285584632\_Smart\_Agriculture\_An\_Approach\_towards\_Better\_Agriculture\_Management; |
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| Project No. | 281 |
| Company type | Industry Personnel |
| Organization | Samsung R&D |
| Problem statement title | Real-time estimation of Heart Rate under lighting using Smartphone Camera |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Real-time estimation of Heart Rate from facial images under different lighting conditions using Smartphone Camera Smart phone application that measures heartrate using on-board cameras in real-time and non-invasively offers several advantages and have multiple use cases. Detecting heart rate using only camera has an added advantage because in such case the users do not require any skills or compliance, but has to just capture image/video. During exercise, it is often desired that the user can measure their heart rate without any extra accessory. Wearing a wearable during exercise can be uncomfortable to certain users. Catering to the phenomenon of people using camera as the most popular smartphone feature we can address this problem. This work will predominantly focus on estimating Heart Rate in real-time from facial images captured using smartphone camera. With every Heart Beat blood flows to our face. Whenever our heart circulates blood, the amount of light reflected from the face varies. To the human eye, this variation is invisible. But using image processing techniques we can detect these changes. The underlying principle is to analyse the spatio-temporal variations in the time-series facial images and amplify these variations. The time series of color values at pixels in region of interest is used to estimate the heart rate. For this work data needs to be collected at various lighting conditions: i) Daytime Outdoor (Cloudy and Sunny) ii) Daytime Indoor iii) Night-time Indoor. Data needs to be acquired for resting and exercising condition. This work broadly requires work in the domain of video processing, signal processing and basic concepts of machine learning. |
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| Project No. | 282 |
| Company type | Industry Personnel |
| Organization | Samsung R&D |
| Problem statement title | Eco Drive |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Eco Drive Goal: Reduce carbon footprint of the travel Proposal: Build a smartphone app that helps you to car/bike pool, compare and compete with your friends on the carbon footprint of the travel. Air pollution in India is a serious issue with major contributors being vehicle emissions and traffic congestions. Individuals and communities can play a more effective role in reducing the air pollution if they are aware of their contributions to the same. Carbon footprint is one way of quantifying the direct and indirect emissions. We propose smartphone application (app) that can automatically track the carbon footprint of the users by analysing the details of the commute, such as mode of travel, distance, and duration. Basic guidelines of the app: 1. Community centred – the app lets you invite family and friends to join a community that strives to reduce the carbon footprint 2. Gamification – Virtual points/badges awarded to the members who top the eco-friendliness of commute, or make significant improvements to their carbon footprint 3. Simple to use – the app may request the user to setup their regular mode of travel (private vehicle or public transport) during the onboarding time. The app infers other details of the commute automatically through smartphone sensors (GPS etc.) and related framework, for e.g., Android’s DetectedActivity class. 4. Recommendations – the app encourages pooling by dividing the carbon footprint among the pool participants. In addition, it recommends the public transport for individuals by providing the timing of public transport. |
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| Project No. | 283 |
| Company type | Industry Personnel |
| Organization | Dr Reddy's Labs |
| Problem statement title | Analyse organisational productivity & efficiency based on analysis of Outlook email & calendar data? |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Every employee uses these tools for communication, and in most organisations, decisions, workflows etc take place on Outlook. Can a tool be used to analyse data on email / meeting flows to determine how work and decisions are flowing etc. (for e.g. https://www.quantumblack.com/) |
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| Project No. | 284 |
| Company type | Industry Personnel |
| Organization | Dr Reddy's Labs |
| Problem statement title | ntelligent natural language search for all our R&D data |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | We place all our R&D reports, findings etc in the form of ppt slides in a shared folder. Is there a way to automatically build knowledge from these and to help us with insights for any given search term? |
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| Project No. | 285 |
| Company type | Industry Personnel |
| Organization | Axiscades |
| Problem statement title | Control of multiple drones with one control unit |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complex |
| Description | Objective – The basic objective of the challenge is to develop an algorithm to control 2 drones synchronously and move the pair from one point to another maintaining the attitude of each of the drones relative to one another Description The two drones have to start from a marked starting point, at a specific relative distance and attitude to each other. They have to execute a series of control commands, navigate a predefined path and then land at the end point, maintaining the same relative distance and attitude throughout the flight. The drones have to be able to estimate their location wrt each other and the world(transmitter) , compare the same and be able to determine their true position. Feedback from visual sensors or any other sensor available on a standard drone can be used. The entire operation needs to be performed in a fully autonomous fashion. The usage of way point markers or other markers to define location feedback is allowed for simplicity. |
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| Project No. | 286 |
| Company type | Industry Personnel |
| Organization | CISCO DevNet |
| Problem statement title | Security camera powered with Machine Learning for people detection for queue Data Analytics |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Long lines at some specific time ticketing windows and services counter at Railway station, Bus stand, RTO office, Banks and other places could lead to bad services experiences. On many occasions lines are longer at specific time of day but empty/short at other times. It would be very user if real-time and historical queue length can be made available via website or mobile app to user and facility managers. This would in long-term help deliver better experience and smarter cities. Key technical challenge to solve this problem is to identify persons in specific area. Cisco Meraki camera with MV Sense utilizes a powerful onboard processor to analyze videos and using Machine Learning algorithms detects persons in specific area. Cisco Meraki IoT ready camera can be used as building block in your application. Link: http://cs.co/sih-2019-gov |
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| Project No. | 287 |
| Company type | Industry Personnel |
| Organization | CISCO DevNet |
| Problem statement title | Securing and increasing productivity of BYOD in classrooms at schools |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Many schools allows students to bring their own devices (computer, handhelds or smartphones) to school to help with their learning. Most of the time now teachers encourage students to access online content as content becoming richer with videos and interactivity. Lots of school might even conduct exams on these devices. Now this increases necessity for teachers to have better control on learning and they would like ability to control/filter website access of student during class as desired per the curriculum. What we want: A web portal each school can have to give ability to teachers to block/filter websites based on student's names and or classes. You should be able collect student device and username information via wireless access points and apply some kind of filtering using firewalls. Technology Bucket: (Software - Web Development, Networking, Security, Firewall, Next Gen Firewalls). Link: http://cs.co/sih-2019-gov |
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| Project No. | 288 |
| Company type | Industry Personnel |
| Organization | NCORD |
| Problem statement title | Digitizing health data from non digitized format |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Request for a reusable, pluggable software component that can read various on-digitized health forms , parse the data. The parsed data should be saved in a portable health record format. Sample portable health record formats are FHIR, CCD, HL7, proprietary health data container. Acceptance Features : The system should be able to convert different types of paper forms and other non-digital information stores and convert them into parsable digital content. The parsed digital content will be stored in a portable format. Various different portable health information data formats will be supported for example FHIR, CCD, HL7 The structure of the paper forms should have version management. Library of forms need to maintained. 99% accuracy is expected. Human intervention should not be required for quality checks of the conversions Non digitized Condition : The non digitized data quality in case of text will be similar to having being typed. Handwritten text will be present in predefined areas like boxes.Boxes will be similar to of typed quality. |
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| Project No. | 289 |
| Company type | Industry Personnel |
| Organization | Future Generali |
| Problem statement title | Using AR / VR Technology to sell Life Insurance |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Augmented Reality (AR) and Virtual Reality (VR) offer an innovative way of interpreting the world around us by propelling innovation and driving better customer engagement. How can we make use of this technology to attract and engage couples coming to Future Retail stores and build context for them to buy life / health insurance in stores. The solution should enable the company to showcase value to its customers in a new way by making use of the immersive experience that VR offers, and help the customer to make the right choice |
| You tube Link | <https://youtu.be/8L6CjY5xTUM> |

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| Project No. | 290 |
| Company type | Industry Personnel |
| Organization | Future Generali |
| Problem statement title | Enhancing customer outreach by using social media / P2P network |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Social media has now become a crucial part of digital communication strategies. It is now an effective tool to not only increase brand engagement and win new customers but also to enhance our customer outreach by allowing us to tap the social media networks to establish relationships and increase the span of our communication. We need a solution through which we can leverage public databases and social channels or create peer to peer network to reach out to non-contactable customers whose policies are due for renewal or bonus or maturities are lying unclaimed with us. |
| You tube Link | <https://youtu.be/uJO_98uooFE> |

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| Project No. | 291 |
| Company type | Industry Personnel |
| Organization | Future Generali |
| Problem statement title | Leveraging technology to Improve customer experience |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Insurance is about building trust relationships with customers and the demand for more transparency is now more than ever. A lot of studies have shown that customers care a lot about transparency in their dealings with the industry –clear language, knowing what value they will receive and an open and transparent relationship however, the issue is that they seldom read their policy documents carefully and as a result are not completely aware of what the relationship entails. Can we build a solution to leverage technology (video, voice, QR) to inform them of most important features in a more accessible manner ? |
| You tube Link | <https://youtu.be/XwIfZfDbt10> |

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| Project No. | 292 |
| Company type | Industry Personnel |
| Organization | Future Generali |
| Problem statement title | Building a platform to connect with potential agents and facilitates application process and hiring |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The current rate of Insurance penetration in India is 3.49% of GDP which is still quite low as compared to some of our peers. Such a low penetration, couple with the fact that a large part of India is unemployed or semi-employed gives us a large untapped market available to the industry. The challenge is to get the right talent to utilize this opportunity. Can we create a platform to educate masses about benefits of becoming and agent and provide platform to discover, engage and apply? |
| You tube Link | <https://youtu.be/b0ozmuzbbvE> |

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| Project No. | 293 |
| Company type | Industry Personnel |
| Organization | NCORD |
| Problem statement title | Marathi Language support in smartphone pluggable library |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Request for a voice bot that understands user requests in Marathi. The library of user request will be provided and updated with time. Example of user request : Book Appointment with Dr Joshi at 5pm. The voice bot can provide responses. |
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| Project No. | 294 |
| Company type | Industry Personnel |
| Organization | Schneider Electric |
| Problem statement title | The Schneider Industry Uber-like service app |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Objective: To create a pool of OEM’s, Process specialist’s, Electricians, Freelance Consultants on a single digital platform through an app that can be accessed by End User whenever required as per the service needs. 1. Make strong Schneider Electric distribution GTM 2. Saturate current distributors by introducing new products and solutions for new markets 3.Break the silos increase cross sales via distributors 4. NPS improvement “It is the customer who determines what a business is, what it produces, and whether it will prosper.” The concept of customer centricity is not new, today almost every company vision includes customer centricity as a key driver of its strategy. Companies that adopt this philosophy are 60% more profitable compared to companies that are not focused on the customer. The world is changing around us, the customer base, technology and the environment. For these reasons, we are more focused than ever at the online web-based after sale services will help us to elevate our business and have better connect with end customer, so that products offered not only have functional value but emotional value too. Targeting retailers, distributors and competitive customer conversion will aid in accelerate existing market share. One of the challenge in customer conversion is ease of customer with linked TOTAL COST OF OWNERSHIP. To support end customer understanding the new technologies and make them conversant with the IIOT thru digital way, we need to create a platform where the End Consumer can access the pool of competent and skilled manpower to serve their needs at the time of need with a greater pace. This platform can be accessed not only by SMSE where they will enjoy the services at shared basis at much nominal cost but will also be accessed by heavy Industries for their complex application and consultancies for their Plant maintenance and services. Lack of customer confidence and invisibility of right support are the predominant reasons of lower efficiency productions in Indian Industries. Unplanned downtime can cost a company as much as 20MINR an hour (according to research). Indian electrical markets are driven by distributors and retailers. Around 95% of total electrical business is catered by distributors and retailers. They have reach to the remotest of the places, since they do not have the competence of VFD commissioning the do not serve the customers with this product and hence the availability of the product becomes an issue to EU resulting into bigger downtime. To facilitate these distributors and to serve the EU in time of need Schneider Electric will be first in market to ignite opportunity by setting the world of commissioning in motion. A location based web application that makes an on-demand hiring from pool of certified engineers, electricians or freelance consultants with competency status enables you to grow your business in an efficient way, while conserving your own resources. Certified engineers will adjust the drive parameters to meet the precise demands of the application. This app would leverage our customers to confide in Schneider Electric. Application is engineer-sharing for fast, reliable commissioning in minutes – day or night. There’s no need to wait, you have to just tap request engineer, and it’s easy to pay with credit card or cash. App based services will be cost effective as it provides nearest solution available in that area, distance plays an important factor in deciding cost for services. Today customer is dependent on channel and on availability of its engineers but with this app, customer will be independent to choose an engineer anytime, wherever he wants. It will be transparent service helping customers to provide a seamless digital service experience. Every service kind will be in the database of Schneider and thus reduce the total cost of ownership of the EU. Access to cloud based data can further be used by customer care to trigger warnings to customer for monthly or annual maintenance and end of product life information, product and systems health reports. In a nutshell this app will not only provide the above mentioned benefits but also reduce total cost of ownership and provides overall equipment efficiency. |
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| Project No. | 295 |
| Company type | Industry Personnel |
| Organization | TVS Motors |
| Problem statement title | Decoding customer interest levels and providing realtime prompt to sales representative |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | The sales representative has to be agile to modify the sales pitch based on the interest level of the customer. One of the keys is to comprehend the body language of the customer as product is being explained to him and modify the sales pitch accordingly. The idea is to utilise customer image capturing mechanism and rapidly give a realtime non-verbal prompt through a wearable device to the sales person. Based on these prompts he can modulate his sales pitch and regain the interest levels and help in succesful conversion. Process suggested is use the CCTV footage in the environment. Analyze the body language and immediately, (within microseconds) provide the prompt to a connected wearable device on the customer wrist. |
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| Project No. | 296 |
| Company type | Industry Personnel |
| Organization | TVS Motors |
| Problem statement title | Smart capturing of the intended footfalls in a showroom |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Today the number of footfalls into a showroom is captured by the Sales Executives manually in a register or quotation book. How much of the footfalls are captured is at the discretion of the sales executive. In addition, no information about the prospect is captured like his demographic profile etc. hence it becomes difficult to make any meaningful analysis of leakages. Even if an app is provided to the sales executive to capture all footfalls, it is at his discretion whether to use it or not and a large scale makes it difficult to monitor the same. Other technologies like infra-red based sensors, camera sensors, thermal sensors etc are not efficient and such systems becomes useless in the event of group entries, multiple entries, employees' movements etc. |
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| Project No. | 297 |
| Company type | Industry Personnel |
| Organization | TVS Motors |
| Problem statement title | Smart measurement of "Below the Line" action's effectiveness |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Many promotional activities/actions are carried out at local level to enhance the no of enquiries at Dealerships. These activities include Melas, Bazaars, tagging, paper inserts, in-cinema branding, apartment activities, exchange melas, Finace schemes etc. The effectiness of these activities depends on many external factors like Competition actions during the period, micro-economic environment, outsourcing agents' quality, bad weather etc. There is no single metric or measurement technique that can be deployed horizontally acriss geographies which can provide the right measure of effectiveness for these activities. Having a good measure of whether these activities have yielded desired results will help us in rationalization of resoures and more importantly it will help us in planning and implementing need-based activities. |
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| Project No. | 298 |
| Company type | Industry Personnel |
| Organization | CISCO DevNet |
| Problem statement title | Digital public announcement and chat bot systems. |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | At many public places like Railway station, Bus stand, government offices, banks etc when people walk-in they looks for basic information. Enquiry window becomes bottleneck and leads to bad user experience. We want to create a tool that can be used to manage public announcements in a physical space. - Auto detect people when user walks into physical space using WiFi connection. - Prompt user to join support messaging room for that physical location. - Develop chat bot that can answer frequently asked question for location. - Allow facility administrator to broadcast messaged to all people currently present in physical space. - Allow user to have video call with some remote support staff. Link: http://cs.co/sih-2019-gov |
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| Project No. | 299 |
| Company type | Industry Personnel |
| Organization | NCORD |
| Problem statement title | Selective Health Data pipette |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | From a relational data store we need to extract certain pre-defined health data. Schema for each each relational health data store may be different. This will be useful to onboard new user and extract health data from mySQl, SQL server, Oracle and similar other relational databases. Patients will be able to see their health data from various sources in one view. Each company stores health data using proprietary schema. One sample entity model is https://www.hl7.org/documentcenter/public\_temp\_7E180B55-1C23-BA17-0C7F1FBBB2C8ECC4/wg/mnm/Draft-rim-std.pdf. We need a service to be created and deployed on the database server. This service called as data pipette will selectively extract patient health data and upload the same to NCORD patient health record.The challenge is in coming up with a dynamic mapper and a Machine learning component that auto improves the mapping. |
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| Project No. | 300 |
| Company type | Industry Personnel |
| Organization | Sun Pharmaceutical Industries Ltd |
| Problem statement title | Software to compare Chromatography output and match with the reference standard output using Image recognition/ Artificial Intelligence techniques |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complex |
| Description | Our labs generate Chromatography results and we manually read the output to decide whether the results are within range or not. We would like the team to develop a software that would compare the Chromatography result with the reference standard output and decide whether the chromatography output is within range or not? |
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| Project No. | 301 |
| Company type | Industry Personnel |
| Organization | Sun Pharmaceutical Industries Ltd |
| Problem statement title | Digitize & Integrate reading of equipment with other enterprise systems (Operational Technology and Information technology integration) – Factory Automation |
| Category | Software |
| Technology Bucket | Life Sciences |
| Complexity | Complex |
| Description | Our factories have machines and equipment with PLC and SCADA systems that generate various Operational Data. Some of these equipment cannot be directly integrated with enterprise systems. However these equipment generate outputs which are currently printed out. We want the team to take the output from these equipment and get it directly entered in the database of enterprise systems instead of current practice of printout generation |
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| Project No. | 302 |
| Company type | Industry Personnel |
| Organization | Sun Pharmaceutical Industries Ltd |
| Problem statement title | Software based method of doing analysis of various root causes of problems |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | For various problems, our factory does root cause analysis and create word document. We want the participating team to build a software that would read these word documents and identify the root causes of various problems and create dashboards to show frequency of root causes. |
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| Project No. | 303 |
| Company type | Industry Personnel |
| Organization | Yamaha Motor Solutions India Pvt. Ltd. |
| Problem statement title | Bike E-Catalogue Mobile App |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | Augmented Reality based bike E-Catalogue. Customer can scan the QR code/bike from mobile app to get the insights of bikes features and technology in front. Mobile app with augmented reality proposes the features of bike. App should be able visualizing the key important features on the screen. Eg, Powerful Engine Electrical Stylish Head Lights Diamond Type Frame Suspension Extra Long Seat Raise Grab Bar. ABS Instrument Panel . etc Other Features to change Color Change of bike,send feedback and play videos of Youtube. |
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| Project No. | 304 |
| Company type | Industry Personnel |
| Organization | Yamaha Motor Solutions India Pvt. Ltd. |
| Problem statement title | My City Information Mobile App |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Mobile app to provide all generic public information of selected city of India.Information can be About City Main Attraction Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad] |
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| Project No. | 305 |
| Company type | Industry Personnel |
| Organization | Yamaha Motor Solutions India Pvt. Ltd. |
| Problem statement title | Bike Crash Detection |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | Device which can send the SOS signal on crash of vehicle to the centralized command center. |
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| Project No. | 306 |
| Company type | Industry Personnel |
| Organization | Yamaha Motor Solutions India Pvt. Ltd. |
| Problem statement title | Golf Ball tracking |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Tracking of a golf ball after the ball is hit by the golfer. The application can predict and provide the possible location of drop inside the Golf Course. Solution to be provided by considering one camera. Other factor to be considered is the wind speed, the angle of the shot, impact of shot and goal hole position. Purpose is to reduce the time of Game as most of time is spend in finding the ball. |
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| Project No. | 307 |
| Company type | Industry Personnel |
| Organization | Samsung R&D |
| Problem statement title | Human Activity Recognition using event based sensors for Home IoT applications |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Considering privacy concerns event based sensors such as DVS (dynamic vision sensor) are preferable in smart home than normal RGB cameras. In addition to that DVS is power and data efficient compared to RGB cameras. But DVS captures events corresponds to object under motions which does not contain any texture information like RGB cameras. The problem is recognition of daily essential activities of humans like walking, bathing, eating, cooking .etc using DVS video clips and provide analytics to corresponding services. Domains Involved: Image processing, Computer vision, Machine learning |
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| Project No. | 308 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | Algorithm for double blinding of coal samples |
| Category | Software |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | The coal samples are marked when they are drawn from the rakes and sent to various labs of sampling agencies There is a need for a process to conduct coal sampling so that the anonymity of samples is maintained throughout the sampling stages for determining coal quality This step is essential to ensure no adulteration in coal quality during the entire process as it can have huge impact in organisational operation |
| You tube Link | <https://www.youtube.com/watch?v=oqIsDAIOv9A> |

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| Project No. | 309 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Ayurveda pharma-covigilance – portal (web & app) |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Increasing vigilance towards ASU drug is a matter of concern as well as an opportunity to provide data related to safety of ASU drugs. At present, it is cumbersome and difficult to convey the information obtained from primary PV center to secondary and tertiary centers. This information has to be conveyed to Natioanl PV resource center. Solution: An APP & web based portal can be developed for reporting of ADRs and data can be sent to nodal center |
| You tube Link | <https://www.youtube.com/watch?v=Sn4oZ2ZLHgw&featur> |

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| Project No. | 310 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Epidemiological survey app Builder |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Survey proforma incorporating all the necessary demographic and etiological data etc. may many times extend up to many pages leading to wastage of paper. Sometime, we need apps where there is no net connectivity. An offline APP may be developed so that the recording of data from individual cases may be stored and it may also be having the facility of statistical analysis and consolidating the information in form of charts and graphs. |
| You tube Link | <https://www.youtube.com/watch?v=3nnKSki2PhM&featur> |

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| Project No. | 311 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Portal/app for transfer of vital data at low BW |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | The roles and activities of community health workers (CHWs) are tailored to meet the unique needs of the communities they serve. Critically ill patients (Geriatrics , Low Birth weight babies) needs real time monitoring of vital parameters like Temperature monitoring, Oxygen saturation, Blood pressure, Heart rate, blood sugar level. A app is needed to transfer this data at low band width with video streaming |
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| Project No. | 312 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Chat bots builder |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | A chat bot is often described as one of the most advanced and promising expressions of interaction between humans and machines. “An intelligent chat bot can guide the concerned parents or patients by understanding and assessing the symptoms that the patient is experiencing and identify the care that they need. With the help of a medical chat bot, patients can receive immediate assistance at the touch of their fingertips.” Solution - Development of Voice assisted Chat bots for AYUSH hospitals. |
| You tube Link | <https://www.youtube.com/watch?v=uLAaRqhOHoI&featur> |

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| Project No. | 313 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Non-invasive method of blood glucose monitoring |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Requirement - A NON-INVASIVE DEVICE FOR MORE FREQUENT AND TIGHTER CONTROL Solution - Development of non-invasive smart equipment for monitoring blood glucose levels |
| You tube Link | <https://www.youtube.com/watch?v=yXBtnWfjTkU&featur> |

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| Project No. | 314 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | Audio guide for patient regarding doctor prescript |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Routinely patients are advised orally health cares like diet, lifestyle and medication dosage and frequency in the patient doctor visit, which is often very difficult for a patient to remember after he goes home. Doctor’s advice (Audio) to be converted to QR Code and QR code to be pasted on the patients prescription. A patient can scan the QR code and listen the health care advised by the doctor through mobile app |
| You tube Link | <https://www.youtube.com/watch?v=iRYTT8SBppU&featur> |

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| Project No. | 315 |
| Company type | Central Ministry |
| Organization | Ministry of AYUSH |
| Problem statement title | DECOCTION VENDING MACHINE |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | At present due to busy lifestyle preparation of decoction as per the Ayurvedic method became difficult. BUT Decoction is the most considerable and extensively used dosage form in Ayurveda CLASSICAL WAY OF DECOCTION PREPARATION - In Ayurveda for decoction preparation the plant material be boiled with water in a specific proportion until the original volume is reduced to desired quantity. Solution - vending machines such as tea/coffee vending machine for vending Decoction |
| You tube Link | <https://www.youtube.com/watch?v=fgeZxj7J0Qk&featur> |

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| Project No. | 316 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Collection of real time data of Inundation areas |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | CWC is in the process of development of inundation maps to provide improved forecast. Google has also been roped in to develop models and to disseminate information. There is a need to develop a mobile application for crowd sourcing of real time data from the public residing in the flood affected areas. The crowd sourced data with images, geo-location and time stamped can be used for ground truthing of the inundation maps under development through software modeling by CWC. |
| You tube Link | <https://www.youtube.com/watch?v=CtiE_OJcvE0&featur> |

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| Project No. | 317 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Data of waste water from water retaining structure |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | There are thousands of kilometers canal structures and breaches/malfunctioning/misuse is observed at many places. Mobile application for reporting of such instances, should be able to take about 5 to 10 images and /or video and upload it to the web with geo-location and time stamp. The information in the form of notification/alert may go to the concerned district level administrative officer who in turn can forward the same to the concerned engineering department and keep a track of it. |
| You tube Link | <https://www.youtube.com/watch?v=Ffse-37JaM0&featur> |

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| Project No. | 318 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Assessment of increase in depth of tube/borewells |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | A website/mobile app to give water level and other related parameters data as input and generating a water level trend with forecast. Using the minor irrigation census data on Block basis for every 5 years, the trend in changes in the depth of the wells can be studied for selected areas. This will be helpful in ground water studies. |
| You tube Link | <https://www.youtube.com/watch?v=Exr0_Nl1RjY&featur> |

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| Project No. | 319 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Distribution of groundwater intensive industries |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | CGWA provides NOC for extraction of groundwater for Industrial purpose. The data of the Industries and the Quantum of extraction permitted for use by the industries, can be used to map the groundwater intensive Region in the country. The output can be used in comprehensive assessment of the spatial pattern of extraction of groundwater for industrial uses. |
| You tube Link | <https://www.youtube.com/watch?v=jFGMv92J_wU&featur> |

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| Project No. | 320 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Aquatic drone for water quality measurement |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Simple |
| Description | How to measure, map & monitor the water quality of Ganga River, its tributaries & drains along X section through sensor deployed on aquatic Drone. Develop a aquatic drone • Handled/ controlled by mobile app • Data fetch on geo web portal like Bhuvan Ganga Geoportal • Live streaming of water quality monitoring |
| You tube Link | <https://www.youtube.com/watch?v=6_DMs_0rQE4&featur> |

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| Project No. | 321 |
| Company type | Central Ministry |
| Organization | Min. of Water Resources |
| Problem statement title | Dash board/App to monitor STP running status |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | How to monitor the live status of sewage treatment plant & inlet/outlet water quality monitoring through dash board & App Using • Quantity of treated/untreated water • Time of open & close STP functions |
| You tube Link | <https://www.youtube.com/watch?v=D9GPPFwDJN4&featur> |

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| Project No. | 322 |
| Company type | Ministry of Culture |
| Organization | To measure science literacy/scientific temper |
| Problem statement title | Software |
| Category | Miscellaneous |
| Technology Bucket | Complex |
| Complexity | Complex |
| Description | An App based questionnaire/feedback form with the use of only graphics/pictures/charts without text material could be developed for analysing feedback. |
| You tube Link | <https://www.youtube.com/watch?v=n7hL-gRhAcU&featur> |

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| Project No. | 323 |
| Company type | Central Ministry |
| Organization | Ministry of Culture |
| Problem statement title | To find out the aptitude of a child |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | AI based game application using Gardner’s Theory of Multiple Intelligence. |
| You tube Link | <https://www.youtube.com/watch?v=9ZtUq_tC1-I&featur> |

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| Project No. | 324 |
| Company type | Central Ministry |
| Organization | Min. of Statistics & PI |
| Problem statement title | Automation of Statistical Information Compilation |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | DSDD officials have to routinely browse official websites/annual reports of various data source ministries to see whether or not a desired statistical indicator has been published by the concerned ministry. Following problem may be considered: a. With the usage of machine learning techniques, can this manual browsing of information be automated? b. With the usage of web scraping tools, can DSDD obtain a notification about upload/hosting of relevant Annual Report/web on its mail-id/mobile number? c. Along with notification, can a designated report/webpage be downloaded and emailed to DSDD for its necessary action? |
| You tube Link | <https://www.youtube.com/watch?v=iroTr7R7GTc> |

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| Project No. | 325 |
| Company type | Central Ministry |
| Organization | Min. of Statistics & PI |
| Problem statement title | Preparation of Gross Value Added (GVA) and storing |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The data for several economic activities is to be entered through an interface every year. Several indicators are also to be entered through an interface annually. The indicators are applied on data for preparing GVA every year. These GVA estimates are presented in pre-defined various statements. The GVA estimates undergo change in following year. We should be able to enter data every year, prepare GVA, produce statements for further dissemination and store GVA for future reference. |
| You tube Link | <https://www.youtube.com/watch?v=mckE2Vnwo9s> |

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| Project No. | 326 |
| Company type | Central Ministry |
| Organization | Min. of Statistics & PI |
| Problem statement title | Preparation of Dashboard for National Accounts |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The data for national accounts is available in Excel/ Access formats. This data is organized for crop/item/category level, current/ constant prices and for the years 2011-12 to 2016-17. What we want: We should be able to choose economic activity/current-constant prices/years to see time series of the data and the corresponding graph and drill down to the relevant levels. |
| You tube Link | <https://www.youtube.com/watch?v=uAOL5S0dFso> |

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| Project No. | 327 |
| Company type | Central Ministry |
| Organization | Min. of Statistics & PI |
| Problem statement title | Crowd sourcing of the works for MPs |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | There is a need to develop a digital platform which provides the citizens to list the works that should be recommended by a particular MP or to endorse the listed works of others. The platform should also inform the respective MPs about the works that are listed for his recommendation along with the number of endorsement each work has received. However, it would be discretion of an MP to select the works, out of this crowd sourced works, for recommendation. |
| You tube Link | <https://www.youtube.com/watch?v=yCkOOPUEAdg> |

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| Project No. | 328 |
| Company type | Central Ministry |
| Organization | Min. of Statistics & PI |
| Problem statement title | Information Management System |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Software can be developed whereby the bulk emails can be automatically sent by selecting number and name of already specified respondents and the whole process may be monitored through logging in the software. Automatic reminder along with an SMS alert can be sent to the divisions from where the information is pending after the stipulated time. The information received should also be consolidated at a place automatically. |
| You tube Link | <https://www.youtube.com/watch?v=WcmMLbk_esU> |

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| Project No. | 329 |
| Company type | Central Ministry |
| Organization | Min.of External Affairs |
| Problem statement title | App for top ten OWASP vulnerabilities scan |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | There have been increased instances of attack on websites. The commercially-of-the shelve software have good GUI but it can only be operated by users having technical background/expertise in application auditing. There is a requirement to design and develop an application which can scan a website for top ten OWASP vulnerabilities quickly and it should be user-friendly. The auditing tool should be-be GUI based application. |
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| Project No. | 330 |
| Company type | Central Ministry |
| Organization | Min.of External Affairs |
| Problem statement title | Application to show process ID and Remote conn. |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | A GUI based application which should show process ID and the connection which it is making, duly giving the location of each country. It should categorize display into commercial rootkits and others. The other rootkits may be shared with some standard repository like ‘Virustotal.com’ etc., to ascertain whether the process is malicious or safe. Accordingly, real-time white listing and blacklisting database may be built for users. |
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| Project No. | 331 |
| Company type | Central Ministry |
| Organization | Min.of External Affairs |
| Problem statement title | Encrypted VOIP using symmetric or asymmetric key |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | There are many freeware VOIP applications which are being a user. There is a requirement to develop an encrypted VOIP using a symmetric or asymmetric key. The VOIP encryption/decryption software module should be independent of any platform, and it could be integrated with any open standard VOIP protocols. |
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| Project No. | 332 |
| Company type | Central Ministry |
| Organization | Min.of External Affairs |
| Problem statement title | A robust algorithm for secure comm messengers |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The secure communication messengers are a big hit these days. It provides secure voice, video, and data communication between user. However, there is a need to use a robust encryption algorithm to ensure that messenger provides encrypted communication on any Android or IOS mobile platform. A robust algorithm needs to be designed for indigenously designed messenger which could be used for professional purposes. |
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| Project No. | 333 |
| Company type | Central Ministry |
| Organization | Ministry of Power |
| Problem statement title | Feedback of Power supply position |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | • Availability of power supply in rural and urban areas with duration • Duration of interruption of Power Supply in rural and urban areas • The above data to be mapped with administrative boundaries like Census Village, District and State for better identification and analysis. |
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| Project No. | 334 |
| Company type | Central Ministry |
| Organization | Ministry of Power |
| Problem statement title | Distribution of Electric Power for agriculture |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Due to lack of guidance and knowledge farmers are unable to manage to utilise the subsidised electric power effectively. Due to which peak demand is very high at a given time subsequently uncalled shutdown in the distribution system. |
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| Project No. | 335 |
| Company type | Central Ministry |
| Organization | Ministry of Power |
| Problem statement title | Smart monitoring and operating the power system |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | a. Time delay in sending and receiving the signal to the local panels b. Overload situation due to less storage capacity in the control panel room c. Big percentage of faults occur in I/O module d. Problems occurring due to electromagnetic interference (EMI) &Radio frequency interference (RFI). |
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| Project No. | 336 |
| Company type | Central Ministry |
| Organization | Min.of Labour & Employmnt |
| Problem statement title | Labour Laws compliance while reducing intrusion |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | There are at present about 44 labour laws for ensuring Decent Work in the country. Mostly, the labour laws are violated by employers to improve competitiveness. Regular / Complaint based Inspections or Self certification system have not been able to address the issue in a balanced way. MoLE has introduced Shram Suvidha Portal for inspection management. A technology based solution for improvement in labour-law compliance while ensuring minimum intrusion into the activities of business is needed. |
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| Project No. | 337 |
| Company type | Central Ministry |
| Organization | Min.of Labour & Employmnt |
| Problem statement title | Eradication of Child Labour using Systems Approach |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Though prohibited, and having PENCIL Portal, child labour is still rampant in the country in various sectors. An integrated approach across various stakeholders including Central Ministries and State Governments is required through which child labour can be prevented and also the rescued children can be effectively monitored and tracked in the country. |
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| Project No. | 338 |
| Company type | Central Ministry |
| Organization | Min.of Labour & Employmnt |
| Problem statement title | Knowledge sharing platform for problem solving |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | VVGNLI is an apex institution under the MoL&E committed to labour research and training for enhancing the quality of work and work relations in the ever changing work milieu. “Labour” being a Concurrent Subject, States too have Labour Institutes which also operate with near similar objectives. A lot of knowledge and expertise is generated by these institutions on a day to day basis and a common IT platform (interactive) is required to share the same on a real time basis. |
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| Project No. | 339 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Stoppage of Work due to rain/snow/floods/landslide |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Contractor raises Extension Of Time request on account of bad weather particularly rains . It becomes a challenging task to verify historical weather condition during the period of no work. A need has therefore been felt to develop an app where the contractor shall register the start date of a project including geographical locations and record the date wise hindrances resulting into stoppage of work. The app shall verify the weather related hindrances through the information available on the internet and accept or reject the contractor’s claim on this account. |
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| Project No. | 340 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Application for availability of Highway related raw material in the vicinity of the ongoing highway project. |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Unawareness about the availability of highway related raw material like stone aggregate, sand, fly-ash, cement, bitumen near the project site leads to under / over estimation of the project cost thereby resulting into rebidding or excess payment to the contractor. An application developed to keep records of the availability of highway raw material shall help in optimum cost assessment. The app shall register geo-location of the government permitted stone / sand quarries, thermal plants for fly-ash, cement plants and bitumen refineries to provide their least distance from the project sites. |
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| Project No. | 341 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Citizen feedback on maintenance of road |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | During travelling on roads, the commuters come across potholes/accidents/landslides/ other hazards that may lead to accidents. Citizen feedback is a important feature that will enable Govt. authorities to take timely action on road not maintained. An application may hence be developed to capture GIS based images of potholes/accidents/landslides/ other hazards by the citizens. The road user will register on the application and upload the captured image of the highway. The Govt. authority will be provided with an option to upload images informing of the action taken in response to the feedback provided. The exercise shall bring a feeling of owning of highways among the citizens. |
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| Project No. | 342 |
| Company type | Central Ministry |
| Organization | Ministry of Textiles |
| Problem statement title | SANITATION |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | Lack of sanitation is a major problem in developing countries like India. Much deliberation has given way to the fact that the private sector is needed to tackle sanitation service problems. It is imperative to invest in solutions by offering different sanitation products and services at appropriate prices. An increased focus on sanitation and hygiene is something that can be a motivating idea for startups. Sulabh is a glaring example of a startup that began work in this area. |
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| Project No. | 343 |
| Company type | Central Ministry |
| Organization | Ministry of Textiles |
| Problem statement title | POLLUTION CONTROL IN TEXTILE PROCESSING INDUSTRY |
| Category | Hardware |
| Technology Bucket | Sustainable Environment |
| Complexity | Complicated |
| Description | The textile processing industries generates effluent which contributes to the pollution. Real time data of effluent quality parameters in textile processing industries to be extracted through web/cloud based tools. Air and water quality monitoring and assessment data analytycal methods to be developed to quantify source appointment to protect human health &environmental pollution. A smart support system need to be developed to provide preventive solutions. |
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| Project No. | 344 |
| Company type | Central Ministry |
| Organization | Ministry of Textiles |
| Problem statement title | Development of e-portal/mobile app for marketing |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | The textile industry is an age old industry and it produces various traditional textiles having its uniqueness the online marketing of such unique traditional textiles would connect the artisans to the world. The development of e-portal/mobile app would bring the consumers and producers on a common platform. This would protect the uniqueness of the product and increase the income of the artisans/weavers. |
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| Project No. | 345 |
| Company type | Central Ministry |
| Organization | Ministry of Railways |
| Problem statement title | Manned Level Crossing (MLC) on Indian Railway Network |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | In various Safety Review Meetings, it has been discussed that Indian Railway should make endeavour to move towards Level Crossings free system. As far as Unmanned Level Crossings (UMLCs) are concerned, as per extent instructions, all UMLCs barring few exceptions will get removed from the system shortly. Thereafter, only Manned Level Crossings (MLCs) will remain to be a safety and mobility concern for Indian Railway and is therefore a problem area to be tackled. Elimination of MLCs especially on busy and important routes will also work as one of the speed raising initiative under “Mission Raftaar” in which safety will be of paramount importance. Therefore, it is the need of the hour to make a strategy immediately for elimination of MLCs. As a first and natural choice, elimination of these MLCs by ROBs, RUBs, closure etc., seems to be the easiest solution. However the quantum of work to be done for the same is tremendous and huge finances will also be required for the same. Interlocking of busy MLCs are susceptible to accidents due to human error. Hence, it is very essential that some low cost technological solution with fast implementability is put into place to overcome any eventuality due to human error. |
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| Project No. | 346 |
| Company type | Central Ministry |
| Organization | Ministry of Railways |
| Problem statement title | De-duplication of Price List (PL) numbers |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | All regularly purchase items on Indian Railways are usually allotted a unique code called Price List (PL) number. Earlier the allotment of PL number was a decentralised activity, and therefore the individual zones have in many cases allotted different PL numbers to the same items. Similarly, there are cases where same PL number is allotted to different items. Since, the activity of PL number allotment has now been made centralised, there is a need to correct the old data by eliminating the duplicate PL numbers. The PL database contains lakhs of records. We need an application which will suggest duplicate PL numbers to the users by finding similarities in the PL description field of different PL numbers. Two types of key words can be incorporated in the database: (i) Specific Keyword/phrases (like Bogie Bolster, Partition frame etc.) (ii) Generic Keywords - like ‘any numbers’ The application shall find matches on the basis of specific or generic keywords, display both the PL numbers and description in juxtaposition. The user will decide to merge/or ignore the suggestion, and in case the PL number are to be merged, the user will also advise the PL number and description which is to be adopted. |
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| Project No. | 347 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Platform that lists all Startup related events |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Number of Startup networking events are organized across the year by Startup community stakeholders including Government, Investors, colleges,etc. at both national and global level. A dedicated platform is required for tracking and providing repository of such events. a.It should utilise the Web Crawler for more efficient indexing and ‘web spidering’ of keywords related to startups events. b. Platform shall also allow Startups to apply for these events. |
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| Project No. | 348 |
| Company type | Central Ministry |
| Organization | Ministry of Railways |
| Problem statement title | Media Plan |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | (a)The work of choosing newspapers for every advertisement to be released is done manually.The rate/circulation of newspaper is checked manually from DAVP website, which is laborious and also is prone to error in noting down advertisement rate. (b) It is not feasible to monitor the release of news concerning Ministry of Railways-whether positive or negative due lack of resource/staff. Using digital technology, a system to be devised to inform/give notification in real time or within 12 Hrs. |
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| Project No. | 349 |
| Company type | Central Ministry |
| Organization | Ministry of Railways |
| Problem statement title | Public address System |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | It is observed that the announcements from public address systems at railway stations are at times not audible. It may be due to train noise, crowding at the station, technical defects in the public address system etc. A solution needs to be evolved so that the passengers can listen to such announcements clearly on their personal devices like mobile etc. |
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| Project No. | 350 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Dashboard for monitoring progress of Startup India |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Dashboard needs to be developed for DIPP to effectively monitor the progress of 19 action points under the Startup India action plan. The data for the dashboard shall be provided by the departments of Monitoring Committee of Startup India. The dashboard should provide: a. Latest updates on all the action points b.Archives of Minutes of Meetings of monitoring committee c.Comparison of targets and achievements of the departments d. Notifications on any achievement/ delay e.Monthly status report |
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| Project No. | 351 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Grievance Redressal platform for Startups |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Startups submit grievances to Ministries/ Departments concerned and in certain cases they request DIPP to intervene and resolve the issues. A dedicated platform for Startups to submit their grievances shall be developed to ensure timely resolution. Platform may include following features: a.Submit the grievance for different categories, Departments, etc. b. DIPP to review the case and submit recommendation c. Case officer & escalation matrix, d: Request Status, resolution period & action taken |
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| Project No. | 352 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Platform for Startups to avail mentor-ship support |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | Many Startups have to deal with Government entities while working on their business ideas. Government officers may be able to provide required mentorship in product design, complying with regulations and guidelines, information and application process Government schemes, connecting them to relevant stakeholders, providing Government market research data, opportunity to pilot, etc The platform will enable a Mentee to connect with the right Professional Mentor from various Central Government Dept. |
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| Project No. | 353 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Startup Ecosystem Tracker |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | At present, there is no consolidated register/ database of all Startups across India. A platform may be developed for that purpose. The platform will help in a. Identifying stakeholders for sourcing information on Startups b. Dwelling into state startup cells and incubators data The platform will remove duplicity in Startup data. The collection of this data will help bring in data-driven insights, thereby helping in scale-up of Startups, job creation and economic growth. |
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| Project No. | 354 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Platform to connect Startups with Corporates |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Engaging with Startups can be one way for Corporate to get fresh ideas. There is an impending need for creating a platform for Corporate and Startups to connect, exchange their innovative ideas and collaborate to solve wide array of industry problems. The platform shall fulfill following two key objectives: a. Corporate shall be able to list challenges and source ideas from innovators b. Innovators shall be able to publish their innovative business ideas and attract interest from corporate |
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| Project No. | 355 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Market place for Startups |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Access to funds is a big roadblock in the growth journey of a Startup. To address this gap, several investment vehicles have been created such as venture funds, fund of funds, etc. to fund Startups. Creating a common platform aggregating all the financing channels for Startups shall remove the bottleneck, ease the application procedure and improve the access to funds. The platform shall also include details for all the financing channels and single application form with application status. |
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| Project No. | 356 |
| Company type | Central Ministry |
| Organization | DIPP |
| Problem statement title | Financing platform for Startups |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Access to funds is a big roadblock in the growth journey of a Startup. To address this gap, several investment vehicles have been created such as venture funds, fund of funds, etc. to fund Startups. Creating a common platform aggregating all the financing channels for Startups shall remove the bottleneck, ease the application procedure and improve the access to funds. The platform shall also include details for all the financing channels and single application form with application status. |
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| Project No. | 357 |
| Company type | Central Ministry |
| Organization | Dept of Atomic Energy |
| Problem statement title | 3D Visual of radiation source using area dose |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Occupational workers carry wearable sensors for radiation dose data logging, datasets are generated due to movement of workers. A computer code running on GPU/CPU is required which can solve reverse Boltzman Transport Equations (BTE) in offline mode using collected datasets (X,Y,Z,Dose) for given area & do 3D visualization of radiation source in that area. Radiation protection program can take corrective measures for removal of unwanted sources. |
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| Project No. | 358 |
| Company type | Central Ministry |
| Organization | Dept of Atomic Energy |
| Problem statement title | Malicious webpage detection using machine learning |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | The number of web pages on Internet is growing exponentially every day. The conventional approach of detecting malicious web pages through the blacklists and controlling their access at the organization level is not going to be effective in the near future. It is necessary to apply novel approaches based on Machine learning (ML) to detect malicious web pages. The challenge is to build a binary classifier that will mark web pages as malicious or non-malicious in real-time. |
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| Project No. | 359 |
| Company type | Central Ministry |
| Organization | Dept of Atomic Energy |
| Problem statement title | Brain Image segmentation using machine learning |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | The goal of this project is to develop segmentation methods to fragment features of the brain like white matter, tumor etc in 3D, based on ML techniques, which require no human intervention and are robust to the low quality of medical images, with user friendly GUI for showing annotations, developed in Python using open-source ML libraries. Standard data-sets can be used for training, validation and testing purposes. |
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| Project No. | 360 |
| Company type | Central Ministry |
| Organization | Dept of Atomic Energy |
| Problem statement title | Aid-kit for persons with smell sense disability |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | In certain situations like leakage of dangerous gases, fire or smoke outbreak, smell-sense (olfaction) disability can be life threatening. It would be desirable to develop a handy apparatus which can generate alarm or indication for the presence of dangerous chemicals, gas leakage, smoke etc. Use of remote sensors and Artificial Intelligence (AI) in biomedical devices with neuron study & simulations can be employed to achieve the target. |
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| Project No. | 361 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Use of Drone Technology for monitoring progress of construction and linking it to project monitoring application |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | The monitoring of construction works is mostly done in synchronization with financial progress of work based on submission of bills by the Contractor on completion of work stage. It leads to erroneous reporting of completed work quite often because of neglecting the partial work done in large works. At present, applications have been developed where data entry is made by project owning authorities. In order to report the actual physical progress in real time without/with least human interference, an application be developed which can monitor the works as defined in the Contract Agreement with the help of Drones and Artificial Intelligence converting the captured status into physical & financial progress of the works. |
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| Project No. | 362 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Use of Artificial Intelligence for prediction of Highway Status for preventive maintenance. |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Most of roads in our country are designed as flexible pavements which require periodic renewal to ensure sustainability. Due to negligence during construction, natural calamity, overloading etc., the roads keep getting damaged. The treatment of the road damages require exhaustive cost estimation which consumes lot of time. With the use of Artificial intelligence, an application supported with IOT device may be developed which would record the damages occurring on road and predict the condition of road based on such data and link it with available data to quickly workout type and cost of treatment required to rectify the damage. |
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| Project No. | 363 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Schema for modular construction of Bridges, from Foundation to Super Structure. |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Minor Bridges are of small spans but still take a lot of time to get constructed. Modular designs, however, allow Contractors to construct them in less time with quality. Considering class of loading and geotechnical data obtained from tests, an application can facilitate the entire design of bridge i.e. from foundation to superstructure in much less time. It shall enable a designer to quickly design the bridge w.r.t. its suitability as per site conditions. |
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| Project No. | 364 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Application for designing of Slope protection measures with relevant geological data & as parameters |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | The Highways are of great importance in hilly regions yet they pose serious threat to commuters in landslide prone areas. The hilly areas face frequent rains and are vulnerable to continuous erosion and landslides. Designing slope protection measures requires data on rock properties, angle of repose and angle of dip etc.  An application supported with IOT devices may be developed which can identify/predict the probable slope failures in real time and quantify the cost/risk associated with it thereby helping in design of slope protection measures to address such life threatening vulnerable landslide zones on hill roads. |
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| Project No. | 365 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Electronic Payment of User Fees at the Toll Plazas |
| Category | Hardware |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Toll collection at Highways poses a series of issues to commuters in terms of ease of payment as well as time taken to cross the Toll Plaza. An application supported with on Board Units may be developed which can collect Toll through mobile wallet / other payment gateway by identifying the user in real time and allow smooth and quick transit through the Toll Plaza. |
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| Project No. | 366 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Black spot alert on mobile phones of travelers. |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Simple |
| Description | Road accidental death is a cause of major concern on Highways. Black spot is a place where road traffic accidents have historically been concentrated. An application may be developed which can capture GIS based location of the user and alert them of nearby black spot on his mobile. Such cautioning can help in reduction of road accidents. |
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| Project No. | 367 |
| Company type | Central Ministry |
| Organization | Min. of Road Transport |
| Problem statement title | Mobile based User Fee Payment. |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | Mobile phone users are rapidly increasing and use of mobile based digital payment is preferred mode of payment for smart phone users. An application may be developed which can be used to make user fee payments at various Government Departments e.g. Road Tax, Insurance, Pollution Test, Toll Tax etc. |
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| Project No. | 368 |
| Company type | Central Ministry |
| Organization | Dept of Atomic Energy |
| Problem statement title | Medical Emergency App |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | Timely response to medical emergencies such as cardiac arrest, snake bite, brain haemorrhage is very important for saving life. It is desirable to develop A Medical Emergency App with location–based information which can provide timely help and also mobilize vital resources such as Ambulance, Doctors, Hospital/Medical Centre etc. |
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| Project No. | 369 |
| Company type | Central Ministry |
| Organization | Min. of Civil Aviation |
| Problem statement title | Presenting Information contained in a NOTAM |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | A NOTAM is a notice that is originated and disseminated to the users whenever the information to be distributed is of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration are made at short notice, except for extensive text and/or graphics. However, at times it may be difficult to visualize the situation through the text only message. Details are available on the link https://aim-india.aai.aero/notam-summaries. |
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| Project No. | 370 |
| Company type | Central Ministry |
| Organization | Min. of Civil Aviation |
| Problem statement title | Presenting Aerodrome Obstacles around an Aerodrome |
| Category | Software |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complex |
| Description | The obstacles around an aerodrome are very critical information for the flight crew. This information is published in AD 2.10 section in AIP. The different obstacles around an aerodrome to be placed on the Google Earth Platform along with their information (metadata) tagged. • Example: https://aisjapan.mlit.go.jp/html/Info/eTOD\_E.html |
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| Project No. | 371 |
| Company type | Central Ministry |
| Organization | Min. of Civil Aviation |
| Problem statement title | Presenting Waypoints, Navigational Aids and creating ATS Route Network on the Google Earth Platform |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | The Airports Authority of India is the Air Navigation Service Provide for India. The AAI notifies various ATS routes on which different aircraft navigate for going from departure to destination. These routes are called ATS Routes and are defined using some imaginary point called waypoints and some real physical navigational aids called VORs and NDBs. The coordinates of these waypoints and navigational aids are available in ENR 4.1 and ENR 4.4 sections of a document called AIP (https://aim-india.aai.aero/eaip-v2/index-en-GB.html). Different ATS Routes are published in ENR 3.1 Section of the AIP. • What we want: These waypoints and navigational aids need to be visible on the Google Earth along connected through lines representing different ATS Routes. • Example: https://skyvector.com/ |
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| Project No. | 372 |
| Company type | Central Ministry |
| Organization | Min. of Civil Aviation |
| Problem statement title | Mobile application to get RCS flight seat availability/Fare/Departure/Destination in real time with |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Regional connectivity Scheme first flight started on 27th April 2017. Everybody enquires about the availability of seats and fare for these flights. It is of great help to common man if an application developed exclusively for RCS flights taking dynamic feed from Airline operators, Airport System software and third party ticket booking infrastructure. Links for other airport and airline information can also be provided in the next stage of development. |
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| Project No. | 373 |
| Company type | Central Ministry |
| Organization | Min. of Civil Aviation |
| Problem statement title | MULTIPLE CITY PAIR SLOT ALLOCATION TO AIRLINES WITH RATIONALIZED BLOCK TIME |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Presently, the slot allocation process allocates departure slot at an airport. The airline then requests an arrival slot after due consideration of flying time, taxi out time & taxi in time at the destination airport. If the arrival slot is not available, the next available arrival slot is allotted, Based on slot availability, airport may allocate early slot resulting in shortfall in block time, thereby adding an artificial “balloon” to the total flight time. Slot allocation is done with respect to Gate out Time and Gate in Time for the respective City pair. The variable factors as shown in the last row are adjusted accordingly to meet the requirements of Gate out Time and Gate in Time (Total Block Time). However, the extra padding or buffer time which the airlines add, is based on historic data and not realistic. The airlines would accept the non-corresponding slot times (with their blocks) to allow the flights to be operated. The DGCA also allowed a 10 minute plus/minus window from the standard block time which creates additional variability. Major feature to include: i. Air traffic congestion and Delays to flights due to early arriving flights ii. Incorrect or inflated Block times iii Early departures from origin Airports iv Airlines accepting incorrect arrival slots at congested airports v Absence of Penal action for non-adherence of slots vi Seeking for an innovative solution The airlines will need to be engaged to disclose the optimal block time for each scheduled operation. Once the current data is obtained, the slot schedule needs to be “gamed” via slot swaps where possible and adjustments where necessary to develop an optimal slot schedule. Additional constraints that need to be considered include airline marketing/competitive issues and arrival/departure slot constraints at each airport. As stated above, the desired outcome is an optimized schedule that achieves the desired performance parameters and rationalize the timings. |
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| Project No. | 374 |
| Company type | Central Ministry |
| Organization | MSME-DI, CHENNAI |
| Problem statement title | Preventing letting out Polluted Water into Canals and Rivers |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complicated |
| Description | Several Effluent Treatment Plants (ETPs) have been set up in industrial clusters with a huge amount of government subsidy. Despite this, huge quantities of polluted water/acids are being discharged into rivers, canals, etc. A monitoring mechanism for the water used in industries for processing must be developed. Water audit of the water input/output from each industry which is using water for processing is to be developed. Mode of disposal / recycling of the sediments from ETPs are also to be monitored. |
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| Project No. | 375 |
| Company type | Central Ministry |
| Organization | MSME-DI, CHENNAI |
| Problem statement title | Developing a user-friendly data bank of MSMEs |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | While implementing Public Procurement Policy (PPP), it is found that the MSMEs are not aware of the items required by the Public-Sector Enterprises (PSEs). At the same time, PSEs are not aware of the details of MSMEs which are manufacturing the items required by them. Under this scenario, developing of user-friendly databank, which will link the MSMEs and the PSEs is the need of the hour. Also details of SC / ST enterprises can be incorporated as a separate section for ready reference by the PSEs |
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| Project No. | 376 |
| Company type | Central Ministry |
| Organization | MSME-DI, CHENNAI |
| Problem statement title | Solution for Effective Utilization of Coir Raw Material to avoid wastage |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | There are about 1000 MSMEs manufacturing water pumps of various types and capacities in Coimbatore. They manufacture the pumps based on the orders received from their dealers and customers. In this process, they get little time to plan and execute their orders. Hence it is suggested that the data available with the meteorological department about the forecasted groundwater table based on the rain received during the previous season in various regions can be made available to these MSMEs online. This data can be used by the MSMEs to plan their production quantity and capacity of the pumps for the next season. |
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| Project No. | 377 |
| Company type | Central Ministry |
| Organization | MSME-DI, CHENNAI |
| Problem statement title | Forecasting the Demand for Water Pumps |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | There are about 1000 MSMEs manufacturing water pumps of various types and capacities in Coimbatore. They manufacture the pumps based on the orders received from their dealers and customers. In this process, they get little time to plan and execute their orders. Hence it is suggested that the data available with the meteorological department about the forecasted groundwater table based on the rain received during the previous season in various regions can be made available to these MSMEs online. This data can be used by the MSMEs to plan their production quantity and capacity of the pumps for the next season. |
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| Project No. | 378 |
| Company type | Central Ministry |
| Organization | MSME-DI, CHENNAI |
| Problem statement title | Detection of Defects in Leather |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Leathers are traded / sold out based on their cutting value. Cutting value of the leather is affected due to the defects in the skin/hide. Presently, most of the MSMEs detect the fault/defects by visual inspection. There is a possibility for error. So, a new technology may be developed to identify the defects in leather. Then the defect detection technology can be linked / merged with leather – CAD/CAM design software, so whenever the pattern cutting happens, the software itself automatically detect the defects and align the pattern accordingly |
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| Project No. | 379 |
| Company type | Central Ministry |
| Organization | Orissa Small Scale Industries Association, Cuttack(OSSIA) |
| Problem statement title | Identification of vacant land for industrial use |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Land is an important factor for setting up of industrial units. Most of the existing and prospective entrepreneurs are facing problems in identifying the vacant land which can be put in use for industrial purposes. Though Government has set up industrial estates/industrial areas /sheds for this purpose, entrepreneurs often face a lot of problem to know about the status of vacant land. To address the issue, an app may be developed to locate the existing vacant land offered by the Government agencies with all information such as area, price, infrastructural facilities |
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| Project No. | 380 |
| Company type | Central Ministry |
| Organization | ADIRE-Smart Village, Jahangirabad, Cuttack |
| Problem statement title | Development of Solar energy powered service delivery vehicle |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Service delivery vehicle are in great demand now a day. These vehicles use high amount of fossil fuel. So, there is a need to replace this conventional source of energy to solar power which can be manufactured and used by MSMEs. Solar electric service delivery vehicle with wireless charging is also another approach which can help MSMEs |
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| Project No. | 381 |
| Company type | Central Ministry |
| Organization | Kalp Stone, Mahasamund |
| Problem statement title | Robotic assistance to cut the stones of given accurate dimensions |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | In Mahasamund district of Chhattisgarh state there are approximately 200 enterprises (Micro & Small) engaged in stone cutting and polishing which are all facing similar problems in cutting of stone of accurate dimension (Length, Breadth & Thickness). In absence of low cost cutting machine they are unable to compete with tiles and marble industries. Low cost device to solve their problem can make them efficient by improving quality and output. |
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| Project No. | 382 |
| Company type | Central Ministry |
| Organization | Shree Sita Refiners Pvt. Ltd., Durg |
| Problem statement title | development of Low cost testing of Edible oils |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | In Chhattisgarh state there are enterprises engaged in production of edible oils. To meet the quality and composition standards, oil & food industries use certain oil parameters to maintain the quality. Several factors affect the edible oil quality such as seasonal conditions, ripening stage, harvesting and carriage systems, method and duration of storage, processing technology and it is determined by different analytical methods to assess the stability of oil and to avoid possible adulterations. Such testing facilities for edible oils may be made locally, so that SMEs can benefit. |
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| Project No. | 383 |
| Company type | Central Ministry |
| Organization | Kumbakonam Stainless steel utensils and Equipments Manufacturers Association |
| Problem statement title | Solution to Overcome difficulties in polishing of stainless steel utensils |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | The stainless-steel utensils manufacture reported that they must do the polishing operation inside the utensils manually with some chemicals which is harmful to human and time-consuming process. If a suitable machine / mechanism is introduced for this process, they may save considerable man hours which leads to more productivity also the operation will not cause any health hazardous |
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| Project No. | 384 |
| Company type | Central Ministry |
| Organization | Chennai District Small Scale industries Association (CDISSIA) |
| Problem statement title | Software platform for managing payment transactions of Employee |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | All the MSME are facing a tough challenge in maintaining ESI, PF, Pension Accounts for their employees as each of these are being maintained by different departments with different identification number for each employee. The MSMEs also must maintain separate account and make payment separately to each department. It is suggested to have one employee identification number through which all the payments can be made by a single cheque and Employee Identification Number (EIN) should be valid wherever the individual joins |
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| Project No. | 385 |
| Company type | Central Ministry |
| Organization | Chennai District Small Scale industries Association (CDISSIA) |
| Problem statement title | Mobile App - Software Development for GST |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | After the introduction of GST, MSMEs are facing hardship in filling the returns for GST, e-way bill etc. due to their computer illiteracy. Also, many of the MSMEs are not having computer system and operators to comply with its requirements. It is suggested to develop a user friendly mobile app which can be used by the MSMEs for the purpose. |
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| Project No. | 386 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Truck Weighing based on the suspension of the vehicle |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | After the introduction of GST, MSMEs are facing hardship in filling the returns for GST, e-way bill etc. due to their computer illiteracy. Also, many of the MSMEs are not having computer system and operators to comply with its requirements. It is suggested to develop a user friendly mobile app which can be used by the MSMEs for the purpose. |
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| Project No. | 387 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Automated Foreign Particle Identification in the Liquid Drugs (Pharma Application) |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | As per the standards it is mandatory to check all the liquid drugs (Pharma Industry) through visual inspection for any other/foreign particle in the drug bottle, if this can be implemented through sensors observing the foreign particle in the conveyer belt and remove that bottle from shipment which will increase the quality/efficiency and reduce the manual labour. |
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| Project No. | 388 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Development of Drone for fixing High Tension wire in hilly terrain/rivers |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | It is always a challenging job for electrician to fix the high-tension wires in the hill area, if Drone can be used from one poll to another poll for handling the wires it will reduce the human labour and increase the efficiency. The same can be used to for river crossing high tension wires/lines. |
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| Project No. | 389 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Low cost smart dust bins for Office |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | Under the Swatch Bharath mission we should have all the government offices fitted with these low cost (less than Rs 2000) smart bins which should have anti-theft mechanism and should inform the labour with SMS when the bin is full. |
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| Project No. | 390 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Road traffic management system for hilly terrains areas |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | In the hilly terrains trees falling is natural phenomenon, also river/canals overflowing in season always disturb the free movement of traffic. These incidents block the roads for several hours. Authorities are always informed much later and precious hours are spent on the roads by public. To avoid this an IOT enabled system which give the real time information to concerned authority and the blockage can be cleared at the earliest or detour/diversion of traffic can be done at the minimum time without creating the traffic jams in the above cases. |
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| Project No. | 391 |
| Company type | Central Ministry |
| Organization | Himalyan Chamber of Commerce |
| Problem statement title | Leather Article Design software (Mobile App) for small entrepreneurs |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | It is always left to individual craft person to physically try proto types for leather articles and then implement accordingly. If a simple design software/mobile app can be developed that will help the small entrepreneurs to come with new, innovative designs for the leather article manufactures. |
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| Project No. | 392 |
| Company type | Central Ministry |
| Organization | Usha Fisheries, Bemetara |
| Problem statement title | Innovative solution for Fish Feeding System |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Fish in the hatcheries are sold by weight. For making the fish gain weight the fish need to swim(exercise) especially when the feed (expensive item in fisheries) is provided which is thrown at specific place in the pond randomly. The problem is how to distribute the fish feed around the pond and develop such device that feed should be evenly distributed in pond which will enable the fish to swim across the pond to gain maximum weight. |
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| Project No. | 393 |
| Company type | Central Ministry |
| Organization | Sarda Dairy & Food Products Ltd. |
| Problem statement title | Classification of quality of milk based on viscocity, color and density |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | In most cooperative dairies the collection is done at various collection points. With the recognition of A1/A2 quality milk the separation of the milk at source becomes important else there is a mix-up of the milk at the source itself. Technology is required to separate the milk at the source itself based on the quality. A quick inexpensive equipment is needed to find out the milk quality and segregate it accordingly. |
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| Project No. | 394 |
| Company type | Central Ministry |
| Organization | Triple Plus Solution, Raipur |
| Problem statement title | Robotic assistance for workers to paint the ceilings |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | The most difficult place to plaster paints are the ceilings, as the work there is against gravity. Worker finds it tedious to work because of the height. Workers need quick mobility with height and reach to the ceiling. So, metal extension legs are suggested which the labourers can wear and reach the ceiling along with the required movement and mobility around the room area. These are to be made of metal for durability and rough use at the same time being affordable for mass construction projects. |
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| Project No. | 395 |
| Company type | Central Ministry |
| Organization | M/s Kashyap Brothers, Kanpur |
| Problem statement title | Hardware solution to solve the problem of voltage unbalance, surge problems, power factor distortion etc. |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Butt welding and spot welding machines are used to joint two pieces of metal together such as pipe, flanges, framework in factories. Normally such machines use single Ø or two Ø AC input. Usage of single Ø or two Ø in the machine result in voltage unbalance, surge problems, power factor distortion etc. There is requirement of the technology to avoid phase unbalance arising out of usage of these machine in shop floor...Availability of such technology can be helpful to maintain the phase distortion/unbalance in the supply network easing the DISCOM to maintain uninterrupted power supply and loss of revenue. The technology will also reduce the energy charges to MSMEs. |
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| Project No. | 396 |
| Company type | Central Ministry |
| Organization | M/s Shubham Goldiee Masale Pvt. Ltd., Kanpur |
| Problem statement title | Development of cost effective freeze and drying technology for vegetables/leaves. |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Complex |
| Description | India ranks 2nd in world in the vegetable production. Green vegetable/leaves are mostly seasonal; they are not available throughout the year. Dehydration is one of the preservation methods to preserve these seasonal varieties because 80% of green vegetable/leaves are not consumed and are thrown in the form of garbage. In India sun drying, solar drying, electric/oil fired dryer are commonly used to dry these products. In these methods sensory quality of the product is reduced. The taste and flavour of product varies a lot from natural product. Now a day freeze drying technology is available in the country which is beyond the limit of MSMEs because of its higher cost. Efforts may be made to develop low cost technology ensuring natural taste and affordable for MSMEs. |
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| Project No. | 397 |
| Company type | Central Ministry |
| Organization | Rajdhani Technology |
| Problem statement title | Online mechanism to monitor the working of embroidery machine |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | The embroidery machines are run almost 24 hours a day and several machines are controlled by a limited number of operators. Due to overworking the operators are sometime over speed the process of embroidery to increase their productivity but this create a problem of frequent breakdowns and lack of quality. To avoid this some vigilant and monitoring system are required to check the malpractices by the operators. |
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| Project No. | 398 |
| Company type | Central Ministry |
| Organization | Annant Enersol Pvt. Ltd. |
| Problem statement title | Development of LED light fixtures for hot and dusty climate |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | Energy efficient LED light are commonly and widely used in most of the industries where climate is hot, humid and dusty, this make the life of LED very short. If specially designed fixtures to protect the LEDs are developed the life of LEDs can be increased. |
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| Project No. | 399 |
| Company type | Central Ministry |
| Organization | President Laghu Udyog Bharati, Pindwada (Sirohi) |
| Problem statement title | Design of tools and exhaust system to assist workers in stone industries |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | During cutting and carving of marble/articles in stone industries dust pollution is very high. We wish to develop special tooling’s, exhaust systems etc so that the level of the dust in the working area may be reduced and health issues of the workers are addressed to |
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| Project No. | 400 |
| Company type | Central Ministry |
| Organization | Nagar Nigam Jaipur, Govt. of Rajasthan |
| Problem statement title | Development of Website/APP for collection, transporation,disposal and segregation of waste products |
| Category | Software |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | There is no organized and scientifically planned process for collection, transportation, disposal and segregation of Industrial waste. Disposal and segregation takes places under very unsafe and hazardous condition. Industrial waste is usually directly disposed on low lying area in routine way violating the practices of sanitary land filling. Unscientific dumping and disposal is prone to contamination of ground water and surface water, greenhouse gases, air pollution due to bad odour of the waste and health related problems. To overcome these problems, we wish to find out suitable technologies/mechanism and IT based monitoring for systematic and fool proof industrial waste disposal system. |
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| Project No. | 401 |
| Company type | Central Ministry |
| Organization | DIC, Solan |
| Problem statement title | Development of Website/ App for improving skills and development of workers |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Interactive Audio-Visual training material for soft/ other skills and development of customized self-power projector which could be used in far flung, rural areas. The MSME and KVIC industries have incomparable technical skills, where as they face a problem and various other activities such as quality, planning, marketing, business development, use of computers, customer handling etc. There are many soft skills that need to be trained and for the same interactive training material and hard technology to present the same will strengthen the rural MSMEs. |
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| Project No. | 402 |
| Company type | Central Ministry |
| Organization | Solan Industrial Association, Solan |
| Problem statement title | Design of system for solving the issue of counterfeit problem. |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | The counterfeit problem (IPR Issues) the traditional msmes are struggling with many factors, one of major factor is that counterfeit products being sold on the name of traditional msmes products such as Kullu Shawl. A mechanism needs to be derived using technologies to ensure the entry barriers and vigilance of such counterfeit products, which holds Graphical Index (GI) which will create positive effects in increasing the share of MSMEs. |
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| Project No. | 403 |
| Company type | Central Ministry |
| Organization | Solan Industrial Association, Solan |
| Problem statement title | Development of Website/App for building customer relationship management in regional language |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | CRM for MSMEs: Msmes have market accessibility constraints and it is difficult to reach the right buyers. Many of MSMEs go through a struggling phase to acquire customers. A Customers relationship management based soft application in regional languages will help MSMEs to create loyal customer base. |
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| Project No. | 404 |
| Company type | Central Ministry |
| Organization | DIC, Solan |
| Problem statement title | Extracting Hardware Design Diagram parameters from digital copy |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Scanning hardware solutions for digitizing that the design of the products MSMEs does not have any accessible options through which they can preserve their design in digital form for future references. And being the smaller volume of products does not allow them to preserve the physical samples of the products. If customized technology solutions of scanning are available to them. It is possible to develop design database which will complete industry as whole. |
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| Project No. | 405 |
| Company type | Central Ministry |
| Organization | Sea Food Export Promotion Council |
| Problem statement title | Identification and control of heavy metals in the sea food material using an IoT solution |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Complicated |
| Description | High level Heavy metal (Pb , Hg, Cd) contamination is being noted in sea food material which is an important detrimental factor for export. A technology is to be identified to process the sea food that will reduce the high level Heavy Metal contamination. |
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| Project No. | 406 |
| Company type | Central Ministry |
| Organization | Kisaan Industries, Haldwani |
| Problem statement title | Fat preservation of Spices by Cryogenic grinding |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Complicated |
| Description | The fat content of spices poses problems of temperature rise and sieve clogging during grinding. Due to this temperature rise, spices lose a significant fraction of their volatile oil or flavouring components. Therefore, a cryogenic grinding system was designed and developed to cool the spices before feeding to the grinder and maintain the cryogenic temperature in the grinding zone |
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| Project No. | 407 |
| Company type | Central Ministry |
| Organization | Sadanand umberwadekar |
| Problem statement title | Cost Effective Fume and Dust Cleansing System |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | Methods should be developed so that the fumes released from chimneys get diluted before release in open air, making it less harmful and having a lower environmental impact. In addition, viable technology be developed to extract the carbon from fumes which could be used up in alternative ways. Also, the dust pollution caused during the manufacturing process needs to be tackled using novel ideas and technological innovation. |
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| Project No. | 408 |
| Company type | Central Ministry |
| Organization | Sadanand umberwadekar |
| Problem statement title | Power Consumption Monitoring and Recommendation System for Efficiency Improvement |
| Category | Software |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | There is a need for innovative and viable methods to reduce electricity consumption in industrial units. Innovative software-based solutions that could provide live information related to consumption of electricity by various machines within industry and suggest inefficient consumption by any particular machine etc. Methods for application of alternative sources of energy at industrial scale in a cost-effective way |
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| Project No. | 409 |
| Company type | Central Ministry |
| Organization | Omech India Pvt. Ltd., Aurangabad |
| Problem statement title | Alarm and interlocking system for level indication for inert gas and nitrogen cylinders. |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | In existing setup there is no provision of level indication for inert gas and nitrogen cylinders |
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| Project No. | 410 |
| Company type | Central Ministry |
| Organization | MSME-TC, Okhla, New Delhi |
| Problem statement title | Simulation based building/structure strength testing |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | As per prevailing pattern, we are testing the strength of the building/structure by core cutting methods in our laboratories only. If this can be upgraded to non-destructive method like X-Ray/use of sensors etc., then it may save time cost and it can be done at the sites too rather than building the material to laboratory. |
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| Project No. | 411 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Cost effective Predictive Maintenance System for CNC machines |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Description:CNC machine contains many working parts. These parts regularly need to observe functional working requirement. In order to reduce the breakdown time of machine and annual maintenance cost the machine, a system/Device need to design& fabricate for monitoring such issues. |
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| Project No. | 412 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Component weight detection system for CNC machines |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Description:The Working Component is needs to be loaded on CNC machine for machining operation. Sometimes Operator unable to identify the weight of component before loading on to CNC working Bed. If any additional setup for Device to predict weight of loading component on to the machine. This will avoid the unexpected damage to machine. |
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| Project No. | 413 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | CNC Machine Noise Prediction and Reduction |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Description:When machining process is running on CNC Bed, the noise levels are high at some times. This might be due to unrelated cutting parameters on workpiece set by operators. A device/system to predict from decibel level noise &vibration of machine and mounting structure of machine. |
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| Project No. | 414 |
| Company type | Central Ministry |
| Organization | M/s.Vighnharta |
| Problem statement title | Sound Efficient Pulse Jet Technology Alternatives |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Currently the Pulse Jet based Technology makes a huge sound in thermal fogging machine, these are used to eradicate Mosquitoes by fogging chemicals. This sound is around 100 dB. Hence, they would like the Sound Engineering, Material Engineering & Mechanical Engineering Wings to work together with them to bring the sound level down to 60 to 65 dB. |
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| Project No. | 415 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Autonomous Drones Disaster identification and alerting system |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Simple |
| Description | Drones will invariable fly into unusual situations, and whether it’s swarms of bees, bird attacks, lightning strikes, or signal jammers, they will need to alert operators of problems as soon as they arise |
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| Project No. | 416 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Black Box Logging system for Drones |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | During fly time whenever a drone crashes, it is impossible to get information about the place and reason for crash |
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| Project No. | 417 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Intrusion detection and Recovery system for Drone Signals |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Simple |
| Description | "signals are far from perfect. If a signal is lost, hacked, or hijacked, the drone must either return home or be removed from danger which is the biggest challenge." |
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| Project No. | 418 |
| Company type | Central Ministry |
| Organization | CITD, Hyderabad |
| Problem statement title | Privacy Management System in Drones Data Collection |
| Category | Software |
| Technology Bucket | Robotics & Drones |
| Complexity | Complicated |
| Description | Description: Privacy means different things to different people, but flying drones with cameras, scanners, and sensors give nefarious people far more capabilities than ever before as they can easily gather information from Drone by using wireless technologies which is dangerous. Hence Privacy rules need to be incorporated in the operating system of the Drone so that information carried by Drone will be safer, which the major challenge |
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| Project No. | 419 |
| Company type | Central Ministry |
| Organization | Manohar glass works |
| Problem statement title | Automation |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | •Several continuous furnaces need automation for improvement in overall efficiency, presently all furnace parameters are operated/controlled manually resulting in wastage of raw materials, energy and other resources. Upgrading to new technologies with auto controlled parameters help reduce overall losses and life of the furnace can also be improved. |
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| Project No. | 420 |
| Company type | Central Ministry |
| Organization | Consultant & Professor, DIT Universtiy, Dehradun |
| Problem statement title | Automation and optimization of furnance parameters to reduce westage of raw materials |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complex |
| Description | The Grid Automation System is a programmable intelligent electronic device (IED) with PMU capability designed to simplify substation automation while improving measurement visibility. Since full substation automation relies on substation integration, the terms are often used interchangeably. Power-system automation includes processes associated with generation and delivery of power. Monitoring and control of power delivery systems in the substation and on the pole reduce the occurrence of outages and shorten the duration of outages that do occur. The IEDs communications protocols, and communications methods, work together as a system to perform power-system automation. The term “power system” describes the collection of devices that make up the physical systems that generate, transmit, and distribute power |
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| Project No. | 421 |
| Company type | Central Ministry |
| Organization | Consultant & Professor, DIT Universtiy, Dehradun |
| Problem statement title | Online Virtual Exibition Platform |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Virtual Exhibition platform brings traditional exhibitions to digital era. Virtual exhibition offers a solution for exhibitors and businesses to attract and contact customers, investor and suppliers cost effectively via internet in 3D environment MSMEs can set up their own stand or even build their own showroom. They can easily distribute product brochures in electronic form, display slide show and video presentations, or even bring their own product as a virtual 3D model for viewing. The space allows for a more affordable attendance at fairs, including fairs that you may not have the resources to attend otherwise. |
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| Project No. | 422 |
| Company type | Central Ministry |
| Organization | Consultant & Professor, DIT Universtiy, Dehradun |
| Problem statement title | Hydrogen as fuel in Automobiles |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | A fuel cell-powered vehicle with an engine powered by compressed hydrogen, is like any other electric vehicle but uses hydrogen instead of a large, heavy battery for energy. These innovative vehicles are considered much safer than regular gasoline-powered automobiles. Rather than noxious, poisonous exhaust, a fuel cell vehicle emits only water vapor |
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| Project No. | 423 |
| Company type | Central Ministry |
| Organization | Sara Sae Private Limited |
| Problem statement title | Automatic signalling in railways |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | Electronic Interlocking with centralized operation of points and signals should be provided to eliminate human failure and to replace old mechanical systems. Centralized Traffic Control (CTC) System will help in real time monitoring and better management of trains. It provides for remote operation of signals from the centralized traffic control office |
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| Project No. | 424 |
| Company type | Central Ministry |
| Organization | Hills2Home |
| Problem statement title | Development of Manufacturing Execution System(MES) for the Medical Device Industry |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | Manufacturing Execution System (MES) solutions have the potential to generate efficiencies, improve productivity, and simplify compliance within the medical device manufacturing industry. Used to manage production activities, this class of software typically provides the ability to schedule activity, deliver instructions to operators, synchronize manual activities with automated processes, and integrate with manufacturing computer systems to enable quality control, deviation management and effective enterprise resource planning (ERP), equipment management, and the documenting of floor activities for monitoring and reporting purposes....MES technology enables the replacement of paper documentation with computerized records, known as electronic device history records (EDHRs), which can be accessed in real-time by all users |
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| Project No. | 425 |
| Company type | Central Ministry |
| Organization | NKSSIA, Hubli |
| Problem statement title | Medical Infrastructure Management by Scheduling visits and online access |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | The ESI/ESIC hospitals are few in numbers across the state and other alternatives are not very common near the industrial estates. Hence, planning and infrastructure ideas are needed to provide urgent and improved medical service near to the industrial estates. Alternative arrangements like local dispensaries or timely visits of recommended doctors and availability of health services should be taken into consideration |
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| Project No. | 426 |
| Company type | Central Ministry |
| Organization | Dharwad Growth Inds Assn, Belur |
| Problem statement title | Innovative Payment and Recovery System for MSME |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | MSME Samadhan Portal was introduced to tackle the issue of delay payments. But industrial units mention that even after registering the complains in the portal, the recovery of delay payments from third party remains a major cause of concern. |
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| Project No. | 427 |
| Company type | Central Ministry |
| Organization | Triple Plus Solution, Raipur |
| Problem statement title | Hyperthermic Intraperitoneal Chemotherapy Machine |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complex |
| Description | Intraperitoneal hyperthermic chemoperfusion (HIPEC or IPHC) is a type of hyperthermia therapy used in combination with surgery in the treatment of advanced abdominal cancers. In this procedure, warmed (controlled temperature) anti-cancer drugs are infused and circulated in the peritoneal cavity (abdomen) for a short period of time. Sometimes heart-lung machines are used in case this specialized device is unavailable. To make this therapy cost effective and safe, such a machine design is needed. |
| You tube Link | <https://www.youtube.com/watch?v=l65xOD7nPbc> |

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| Project No. | 428 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | Heavy Earth Moving Machinery Monitoring |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | Different parameters of (Heavy Earth Moving Machinery) HEMM like engine oil pressure, water temperature, the air pressure in the brake, hydraulic oil pressure cannot be monitored very effectively due to many uncontrolled reasons. This results in the breakdown of engines and consequent losses. A prototype is to be developed where all these parameters mentioned above will be reflected in a digital display panel. In case of any divergence, an alarm is to be generated. This control panel may be connected to the vehicle through GPS or any other method and to be kept at control room. |
| You tube Link | <https://www.youtube.com/watch?v=-XMabuZlzs8> |

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| Project No. | 429 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | Automatic alert to Safety Officers |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | An automatic alert to Safety Officers or Ambulances for accident victims in vehicles could be given by developing a software and a prototype hardware sensor. The sensor device may be integrated or embedded to the vehicle's collision detection system (for example: like deployment of Airbag, collapsing the steering) so that when accident occurs, sensor and associate software will send a panic signal using the GPS technology to all the GPS enabled ambulances nearby with exact location of accident. The alert may also be sent to police control room. The combination of hardware and software may be suitable for deployment in all type of vehicles. This will help to provide immediate medical assistance to the victim and can save the life. A prototype hardware sensor may be developed which has to be embedded in the vehicle to sense accident / collision. A software may be developed to integrate with the vehicle's GPS software system, which will automatically have activated by sensing the collision and will send alert messages either to police control room or to all GPS enabled Ambulances nearby to attend the accident site with exact location of the accident. This will save valuable time to save the life of victim. |
| You tube Link | <https://www.youtube.com/watch?v=GyGwxDTNbWY> |

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| Project No. | 430 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | IOT Device for Tracking CSR Assets |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Currently, there is no mechanism of tracking the assets created under (Corporate Social Responsibility) C.S.R. If a device with the below-mentioned capabilities is created, it would be easier to locate and track the progress of ongoing projects on a pan India basis. Software Features: Interface to view all the assets in the selected network Location of all the assets to be displayed on a map Data of all the assets to be served from an API at a centralized server The entire setup should be scalable Hardware Features: Programmable Device with GPS Ability to communicate with the Database servers with SMS messaging Outcome: Project monitoring can be done on a real-time basis and having a databank of all the assets created can help in the analysis |
| You tube Link | <https://www.youtube.com/watch?v=BBD8Z94ATUg> |

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| Project No. | 431 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | Fuel Tank Guard |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Tank Guard should be a sophisticated sensor fitted externally in a discreet location on the outside portion of the fuel tank. If thieves attempt to remove the locked cap or in any way try to attack the tank, then the Tank Guard alarm will be activated and give an alarm. The Tank Guard should also send an immediate alert via text. A GSM unit works in conjunction with it to warn of immediate theft attempts. It should include Anti Siphon product, in conjunction with a Fuel Theft Alarm. The opportunist Fuel Thief will be thwarted by the anti-siphon at the filler neck and once the alarm sounds a public warning to clear off. |
| You tube Link | <https://www.youtube.com/watch?v=i7EaIeXK9cw> |

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| Project No. | 432 |
| Company type | Central Ministry |
| Organization | Min. of Coal |
| Problem statement title | Mine Accident Rescue Operation |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | In case of mine accidents, safety and rescue operations involve moving large amounts of debris. Debris is a scattered remains of something destroyed in case of roof fall, gasses explosion etc. While in the process, it takes lots of time to locate the exact position of the victim trapped under debris. The delay in locating could prove to be fatal. If the victim’s position could be located using a combination of the chemical composition of air for the gases, the rescue operations could be concentrated there and the victim could be rescued efficiently and in less amount of time. A machine has to be developed to measure the air beneath the rubble and detect such chemicals which would mean there could be a victim down there. The sensors fitted into a prototype will help find a live person in case of roof fall, dump slide or similar situations. |
| You tube Link | <https://www.youtube.com/watch?v=Y15LMmtu0UI> |

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| Project No. | 433 |
| Company type | Central Ministry |
| Organization | ICAR, Min. of Agriculture |
| Problem statement title | Web/Mobile based advisory for identification and management of insect pest in agricultural crops |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Insect Pest take a heavy toll on agricultural crops causing severe loss to the farming community. Crop protection is one of the major component of crop management process. Crops are damaged by attack of disease, insect, nematodes and weeds. Managing them in the field and saving the crop from their attack is a major challenge for the farming community. Our crops are under threat from the day they are seeded til they are harvested causing significant damage to the crop affecting adversely to the farmer's economy. Many factors influence disease development and growth of insect that includes genetics of variety, plant growth stage, weather, soil etc. Most of these information on insects, disease etc has been identified and documented by the Scientists of National Agricultural Research System (ICAR). This documentation will have a better significance if they are reached out to the farming community whenever they need it. Developing a web or mobile app having a complete knowledge base of insect pest carrying its detail in the background will be of great help. It will help in identifying the insect pest in the farmers field based on the damaged symptom or by the image of the insects. On identifying the insect pest the system may provide the management. |
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| Project No. | 434 |
| Company type | Central Ministry |
| Organization | ICAR, Min. of Agriculture |
| Problem statement title | Web/Mobile solution for Horticultural Crop specific Market , Storage, Value Additions and Price |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Through technical and policy interventions India has reached to a record level of 277.49 million tonnes of food grain production becoming second largest producer of fruits and vegetables. However due to inadequate logistic support, lack of refrigerated storage, supply chain bottle necks, poor transport, and underdeveloped marketing channels around 30 percent of the produce is lost falling heavily on the economy of the farming community including woman farmers. Information on crop specific market, prevailing price and minimum transaction cost may be the solution of the problem. Seeing the capacity and reach out potential of web or mobile based application may be of great help. Applying ICT based technical interventions in developing Web/Mobile applications for identifying crop specific market, prevailing price, information on storage facilities,value additions, transportation may help in reducing post harvest losses and adding to improve farmers economy. These technical interventions will become a useful tool for the farming community including women in enhancing their financial returns leading to doubling their income in due course of time. |
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| Project No. | 435 |
| Company type | Central Ministry |
| Organization | ICAR, Min. of Agriculture |
| Problem statement title | Developing Geo referenced map interface using open source technologies |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complex |
| Description | Rice is the most important crop in India. It is widely cultivated in diverse ecologies and agro ecological zones. Management levels and production constraints vary spatially and temporally in these environments. Therefore crop/location specific management practices are needed to increase productivity of Rice crop. The traditional way of collecting precise information by sampling from fields requires lots of manpower and time. As spatial variations in land, soil, water, weather etc. are influencing the productivity of Rice crop, the modern space technologies can appropriately be utilized to derive the precise information in shorter time. Many GIS softwares like ARCGIS, ERDAS Imagine, QGIS etc are available for analysing the spatial data. These spatial files can be utilised further to integrate with other simulation models or visualise these spatial variations to end users. Hence, development of geo referenced map interface is needed to visualise the map along with attribute data and attributes wise classification of the data. Once developed, this interface can be utilised for any other crops/cropping systems. |
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| Project No. | 436 |
| Company type | Central Ministry |
| Organization | M/s Uniq Power Solutions Bangalore |
| Problem statement title | Battery bank remote sensing, controlling & maintenance. |
| Category | Hardware |
| Technology Bucket | Smart Communication |
| Complexity | Complex |
| Description | Regular maintenance of Battery banks and similar systems are required to keep the entire power plant running without unforeseen breakdowns and shut down. There is also need for on-boarding Batteries remotely controlled and monitored for the parameters like Voltage, Temperature, Humidity, location, battery health, current and connectivity which can be loaded to a remote sensor using GSM- LORA etc. This will help in avoiding expensive and inefficient site visits and help in optimized capacity development reducing cost and to take advance preventive and corrective action before breakdown of Battery. |
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| Project No. | 437 |
| Company type | Central Ministry |
| Organization | M/s Sparr Electronics Ltd., Bangalore |
| Problem statement title | Portable handheld optical character recogniser |
| Category | Hardware |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Complicated Bar Code Readers and QR code readers only exist because image processing required to do character recognition has been only available with big computers requiring a lot of space, power and with no mobility. This has changed with low power but high computing Micro controllers becoming available. With the availability of low cost digital cameras and high processing power available in Micro controllers, it should be possible to directly read off text from labels. Values indicate by either gas meters or water meters etc and number plates of vehicles. The need is for highly portable, preferably small and low power hand held scanner which will do optical character recognition on limited text such as on labels, number plates etc. There will not be any need for special printing of Bar Code and Q R Code labels etc. Recognition of vehicles based on number plate will be a huge advantage in many locations. |
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| Project No. | 438 |
| Company type | Central Ministry |
| Organization | M/s Presciece Calibration Pvt Ltd., |
| Problem statement title | Opensource, Development of customizable micro, small industry resource management system |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Micro and small units have man power problem but must manufacture quality products to sustain in the market and because of financial constraints, these units cannot employ more people for small job works which are hourly based. So, there is a requirement of development of open source software which can be customized as per the requirement of micro, small units for work flow requirement containing allocation of work or time line, qualitative follow up reminders, approvals, filing of statutory requirements with easy date of format. |
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| Project No. | 439 |
| Company type | Central Ministry |
| Organization | M/s Macsian Apparels Pvt ltd. |
| Problem statement title | Solution for Fabric length reader, cutter and Fabric digital printer |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | Fabric reader for reading cloth used in apparel industries length wise is being imported and it is of high cost. There is need for development of technology for fabricated reader and low cost used by MSME Sector manufacturing apparels. There is need for development of fabric cutting machines based on laser technology Software must be developed for converting directly the designs developed by artist to digital print. |
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| Project No. | 440 |
| Company type | Central Ministry |
| Organization | MSME Di Guwahati |
| Problem statement title | Customizable Tea Leaves plucking system |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complicated |
| Description | If customized mechanized system is introduced in plucking of leaves & maintenance of canopy table at the desired level, cost of labour may be saved to a good extent |
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| Project No. | 441 |
| Company type | Central Ministry |
| Organization | MSME DEVELOPMENT INSTITUTE DELHI |
| Problem statement title | Solution for Preventing workers from getting exposed to chemicals/fumes in Metal finishing/ Paint/ Cement units |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | A special Mask may be developed for metal finishing operations, so that worker/(s) are not exposed to harmful chemicals/fumes in Metal finishing /Paint / Cement units |
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| Project No. | 442 |
| Company type | Central Ministry |
| Organization | Bharat trader |
| Problem statement title | Low cost Automation machine for making Karanjee, Modak, Ladoo and Samosa. |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Simple |
| Description | Food industry needs Low Cost Automation machine for making Karanjee, Modak, Ladoo and Samosa. Availability of such an application could be useful for food industry to reduce the making time and maintain the quality of product. |
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| Project No. | 443 |
| Company type | Central Ministry |
| Organization | Chaittanya Enterprise |
| Problem statement title | Automatic machine for making cloth bags |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | Cloths bags Making Automatic machine. Cloth bags have become a popular alternative to plastic and paper shopping bags, because cloth bags do not cause the environmental harm of plastic bags. However, cloth bags are not only, for the environmentally-conscious consumer. Unlike the free bagging alternatives, cloth bags usually. come with a nominal price tag, but the advantages of reusing cloth bags outweigh this small cost |
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| Project No. | 444 |
| Company type | Central Ministry |
| Organization | D-206, Tamarind, CD Scenic Acres Fatorda, Margao, Goa |
| Problem statement title | Biogas generation from biodegradable wastes |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Biogas generation is implemented in some of the villages. However, promotion for biogas generation and its implementation can be taken up |
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| Project No. | 445 |
| Company type | Central Ministry |
| Organization | M/s Laxmi Business Cement Co. (P) Ltd, P.O. & Village- Morangi, Distt.- Hazaribagh(Jharkhand)-825301 |
| Problem statement title | Solution to improve Dust Catching System in Mini Cement Plant / Raw material grinding facilities |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complicated |
| Description | Solution may be provided for Improved Technological system for Dust Catching in Mini Cement Plant / Raw material grinding facilities |
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| Project No. | 446 |
| Company type | Central Ministry |
| Organization | MSME-Development Organisation, Govt. of India, Ministry of MSME |
| Problem statement title | Creating prototype of electric two wheeler for reducing traffic noise & road congestion |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complex |
| Description | The large-scale adoption of electric two-wheelers can reduce traffic noise and road congestion but may necessitate adaptations of the existing urban infrastructure and safety regulations. Most electric vehicles today use an electric battery, consisting electrochemical cells with external connections to provide power to the vehicle. Battery technology for EVs may be developed. |
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| Project No. | 447 |
| Company type | Central Ministry |
| Organization | BRM Engineering solutions , Hyderabad Ltd. |
| Problem statement title | Design of portable device to measure the flow of fluid without being in physical contact for finding flow measurement and leak detection |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | ComplexComplex |
| Description | At present, in acoustic hygiene and ultrasonic flow and gas/vacuum leak detection technology, the infrared sensors related to temperature are available, but for measuring the flow of fluid flowing in the pipelines, at present, the flow meter is required to be physically fitted in the pipe to measure the flow of fluid unlike the infrared or temperature sensing portable measuring device which can sense the temperature from outside the pipeline without coming in direct contact with the fluid. There is no portable flow measurement device available commercially which can measure the flow of the fluid without being in physical contact with the fluid. If this type of portable equipment is designed, it will help the flow measurement of the fluid conveniently |
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| Project No. | 448 |
| Company type | Central Ministry |
| Organization | S.K.LED Industries |
| Problem statement title | Management of heat dissipation for LED bulbs to increas life span |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | LEDs, provides five to 10 times as much illumination per watt as incandescent bulbs. LEDs have useful lifetimes in the tens of thousands of hours as compared to thousand or so offered by incandescent bulbs. Problems being faced are, Failure in any of several LEDs on COB (Chip on Board) fixture components can cause the whole LED to fail............LEDs generate heat. LEDs need to be connected to heat sinks to move the heat energy away from the LED, then the heat sinks need to be engineered to get rid of that heat somehow. If LEDs are not cooled, they degrade very quickly, then fail completely. This issue of LEDs generating heat may be addressed |
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| Project No. | 449 |
| Company type | Central Ministry |
| Organization | BRM Engineering solutions , Hyderabad Ltd. |
| Problem statement title | Development of Low cost Air-borne Ultrasound Sensors |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Making Low Cost Air-borne Ultrasound Sensors: - Air borne Ultrasound technology works on the principle of converting high frequency sounds into audible frequency. This technology has multiple applications like Compressed air and vacuum leak detection, bearing analysis, electrical asset condition monitoring, etc........The sensors for this technology cost very much, so the equipment based on this technology are not easily available to small scale industries. If LOW COST ULTRASOUND Sensors can be manufactured, we can address a major area of concern. |
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| Project No. | 450 |
| Company type | Central Ministry |
| Organization | BRM Engineering solutions , Hyderabad Ltd. |
| Problem statement title | Design and development of LED monitor panels to increase its ruggedness |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Delicacy of LED Monitors: - LED Monitor panels fitted in Television are very delicate to any minor impact. They can go bad simply by hard press made on to the surface with the tip of pen or pencil. Many a times, Television dealers suffer huge losses as brand-new LED Monitors go bad due to any sharp touch on the Monitor surface during Transportation. If any modifications can be made to this LED monitor panels to make them bit rugged, their reliability as well as life will increase. This modification can be a big boon for LED Television industry as well as retail users |
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| Project No. | 451 |
| Company type | Central Ministry |
| Organization | All Kerala Small Scale PVC pipe manufacturers association |
| Problem statement title | Design of Environment Friendly Stabilizer for manufacture of PVC |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | An organic based stabilizer is to be developed to replace conventional lead stabilizer as well as calcium zinc stabilizer used in PVC pipe manufacturing. |
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| Project No. | 452 |
| Company type | Central Ministry |
| Organization | M/s eastern Home Industries |
| Problem statement title | Cost Effective Carpet Drying System |
| Category | Hardware |
| Technology Bucket | Robotics & Drones |
| Complexity | Simple |
| Description | Carpet Drying problem in rainy season as machine is not there for drying. Cost effective machine is required. Affordable machine is required |
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| Project No. | 453 |
| Company type | Central Ministry |
| Organization | Human WelfareAssociation, varanasi |
| Problem statement title | Cooperative System for End to End Artisan workers product management |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | The Varanasi is the hub of Artisan works i.e. wall hanging, sarees, badges, logos, wooden craft, stone carving etc. which are scattered in whole district. The need of aspirational or motivation program are required through which they may come under one umbrella and may put their day to day problem in the field of marketing, packaging and designing of their product so that their selling as well as acceptance in market may be enhanced |
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| Project No. | 454 |
| Company type | Central Ministry |
| Organization | V3 Poly plast |
| Problem statement title | Cost Effective Vitamin B12 Candle manufacturing for RO systems |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complicated |
| Description | The use of RO machines & plant is everywhere to reduce TDS of water. RO machines have one component (B12 candle) to maintain B12 level in water. Presently B12 candle are importing from China. Development of B12 candle is essential now because of high consumption. This will reduce cost as well as reduce import. |
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| Project No. | 455 |
| Company type | Central Ministry |
| Organization | MSME-DI Ahmedabad |
| Problem statement title | Market Databank Generation and Sharing Platform |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | It has been observed that the market present scenario and future projection is not available to MSME for any product. This is one of the cause of sick unit in MSME. Product change or updating will discontinue production of any MSME. Future forecast of market / product will give time to switch over in new product to MSME. Market data bank with future forecast and updating of information can be made available through website, mobile notifications etc. |
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| Project No. | 456 |
| Company type | Central Ministry |
| Organization | S.K.LED Industries |
| Problem statement title | Design and development of low cost 'Adsorbent chillers' for waste heat recovery |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | Low Cost Adsorbent Chillers for Waste Heat Recovery: - Low intensity heat like heat from Diesel engine exhaust, return steam line after steam turbine, Furnace body temperature in furnaces, hot water from solar panels etc goes waste into atmosphere without much use. Presently, there is a technology called "Adsorbent Chillers" available to convert this waste heat into Chilled water. But the cost of technology is very high and is not economically viable. If some R&D can be done on making low cost Adsorbent Chillers, it will be a big boon to industry and environment, as it has dual advantage of recovering waste heat as well as minimising costs incurred on making Chilled water. |
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| Project No. | 457 |
| Company type | Central Ministry |
| Organization | Bharat trader |
| Problem statement title | Low cost Automation machine for making Roti, stuff Paratha. |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Simple |
| Description | Food industry needs Low Cost Automation machine for making Roti, stuff Paratha. Availability of such an application could be useful for food industry to reduce the making time and maintain the quality of product |
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| Project No. | 458 |
| Company type | Central Ministry |
| Organization | MSME Di Guwahati |
| Problem statement title | Customizable sorting and packaging system |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | If mechanized system is introduced in sorting & packaging, cost of production can be reduced to a considerable extent. |
| You tube Link |  |

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| Project No. | 459 |
| Company type | Central Ministry |
| Organization | Bharat trader |
| Problem statement title | Low cost Automatic Dishwasher Machine |
| Category | Hardware |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | Low cost Automatic Dishwasher Machine. Using a Dishwasher instead of hand-washing dishes not only saves your personal time and energy, it also cuts down on your water usage. Dishwashers can save you from a life of drudgery. These can help save your precious time. So, the time you waste washing away dishes can be spent in something more important work |
| You tube Link |  |

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| Project No. | 460 |
| Company type | Central Ministry |
| Organization | MSME-Development Organisation, Govt. of India, Ministry of MSME |
| Problem statement title | Development of GPS and satellite imagery based Tsunami alert mechanism |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complex |
| Description | Andaman once experienced tsunami. Hence to alert the people for saving life and property, this technology is the need of the land. |
| You tube Link |  |

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| Project No. | 461 |
| Company type | Central Ministry |
| Organization | MSME-Development Organisation, Govt. of India, Ministry of MSME |
| Problem statement title | Desalination of Sea Water to make Potable Water |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | Water is a precious resource in the Islands. Hence, potable water from Saline water through low cost technology is the need. |
| You tube Link |  |

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| Project No. | 462 |
| Company type | Central Ministry |
| Organization | MSME DEVELOPMENT INSTITUTE DELHI |
| Problem statement title | Cost effective waste water treatment for micro & small units |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Simple |
| Description | A cost effective single unit Effluent Treatment Plant for MSMEs may be developed for waste water treatment to purify industrial waste water for its reuse and to release safe water to environment from the harmful effects caused by the effluent |
| You tube Link |  |

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| Project No. | 463 |
| Company type | Central Ministry |
| Organization | MSME DEVELOPMENT INSTITUTE DELHI |
| Problem statement title | Development of dedicated website/e-portal for Renewal of licenses/ registration for MSEs |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | A dedicated e-platform for problems related to renewal of licenses/registration may be developed for MSEs |
| You tube Link |  |

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| Project No. | 464 |
| Company type | Central Ministry |
| Organization | MSME DEVELOPMENT INSTITUTE DELHI |
| Problem statement title | Recovery of metals from Industrial waste |
| Category | Recovery of metals from Industrial waste |
| Technology Bucket | Hardware |
| Complexity | Waste Management |
| Description | Complex |
| You tube Link | Environmental pollution by heavy metals has been accelerated by the discharge of heavy metals to the environment by several industries such as mining, electroplating, metallurgical, electronics. These heavy metals may be recovered from the industrial waste |

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| Project No. | 465 |
| Company type | Central Ministry |
| Organization | MSME DEVELOPMENT INSTITUTE DELHI |
| Problem statement title | Portable light weight wheel chair |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | A portable light weight wheel chair may be developed for physically handicapped persons |
| You tube Link |  |

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| Project No. | 466 |
| Company type | Central Ministry |
| Organization | M/s Sangwan Electrical (M) |
| Problem statement title | Increasing performance of LED light drivers with consideration of its life span |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Complicated |
| Description | We are manufacturing Solar & LED lights since 2006. We are facing lot of problems regarding over LED light drivers. Our LED light drivers are not giving consistent performance in the field. We are using very high-quality components in our drivers but there is a large variation in their life cycle. We usually supply products under guarantee of min. 02 years, but drivers life span varies from 06 months to 03 years. Please provide us new technology or design so that to increase the performance of drivers. |
| You tube Link |  |

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| Project No. | 467 |
| Company type | Central Ministry |
| Organization | Sea Food Export Promotion Council |
| Problem statement title | IoT based solution for monitoring of pollution through pesticide in fresh fruits and vegetable available in markets |
| Category | Hardware |
| Technology Bucket | Food Technology |
| Complexity | Simple |
| Description | Exceeding level of pesticide contamination of fresh fruits and vegetables causing a health risk to common people as a normal man cannot identify it. A technology or equipment is to be developed to monitor the level of pollution through pesticides in fresh fruits and vegetables available in the market. |
| You tube Link |  |

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| Project No. | 468 |
| Company type | Central Ministry |
| Organization | Human WelfareAssociation, varanasi |
| Problem statement title | Intellectual property Facilitation Centre management |
| Category | Software |
| Technology Bucket | Smart Education |
| Complexity | Simple |
| Description | As per record 8 GI products has been registered Varanasi Distt. and plentiful options are available in and around Varanasi Distt. for the registration of, -1) GI, 2)- Copy Right, 3)- Trademark and 4)- Patent of the product. In keeping of the view Establishment of IP Facilitation Centre in Varanasi highly beneficial for the MSMEs stakeholders |
| You tube Link |  |

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| Project No. | 469 |
| Company type | Central Ministry |
| Organization | ICAR, Min. of Agriculture |
| Problem statement title | Sensor based monitoring of urban city waste water for agricultural use |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | Urban waste water is a major source of pollution of soil and water bodies in our country. The contaminants contain toxic levels of heavy minerals and harmful microorganisms, causing health risk to more than 50 million Indians. Besides, peri-urban agriculture is using the urban waste water as a major source of irrigation, thus posing health hazards to the both farmers as well as consumers. Decentralized treatment of urban waste water has been identified as the only solution in light of ever increasing urban settlements and shrinking availability of unused land and good quality of water resources. A decentralized treatment plan can work with precision, when input and output of the plant is monitored unbiasedly on a real-time basis. Installation of geo-tagged sensors viz. Turbidity, DO, PH, EC, Colour, dissolved ammonia etc. at various critical control points with continuous data streaming and analysis using artificial intelligence can help in monitoring as well as controlling the treatment process more efficiently. |
| You tube Link |  |

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| Project No. | 470 |
| Company type | Central Ministry |
| Organization | ICAR, Min. of Agriculture |
| Problem statement title | mobile based low cost smart irrigation assistant for guiding irrigation scheduling |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | Water scarcity is an imminent issue in India. Increasingly aggravated discrepancies between water supply and demand resulted in extreme water stress. Agricultural sector is responsible for 78 per cent of water use in the country. Presently, there are over 20 million wells pumping water with free power supply, subsidised by the Government. This has aggravated the issue of declining water table (0.4 m per year), while encouraging wastage of water in many states. The mounting pressure on water resources justifies that sustainable use of water resources is fundamental priority in Indian agriculture. Since, water is the most limiting factor in agriculture, technology interventions for sustainable use of water resources at grass root level is the need of the hour. In context of depleting groundwater, there is a need to address the issues relating sustainable crop production and rational water use based on the green and blue water footprints. Technology innovations, evidently, a mobile based low cost smart irrigation assistant for guiding irrigation scheduling encouraging green water consumption at farmers field is to be developed. Water conservation for supplementary irrigation and strengthening irrigation facilities in the state will have much more impact on reducing water footprints. |
| You tube Link |  |

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| Project No. | 471 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | Online Grievance Management System at Institute level |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | It’s a four level escalation system. Student will register grievance using this system. Request will go to committee members of institute. If resolved (with in specified time) than it will be closed else will escalate to principal of the college. If not resolved (with in specified time) will escalate to ombudsman at University level. Final level of escalation to AICTE Grievance Portal. |
| You tube Link |  |

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| Project No. | 472 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | Portal to gather innovative ideas/Best Practices for execution and development |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | For selected innovative ideas, AICTE will contact the owner for its further development including its IPR and uses. Selected Best Practices will be published on AICTE website. |
| You tube Link |  |

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| Project No. | 473 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | AI based tool to get information about 5 good institutes based on AISHE data like faculty student ratio, infrastructure (Laboratory and Hostel facility), research facilities at institutes etc. |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | AI based tool to get information about 5 good institutes based on AISHE data like faculty student ratio, infrastructure (Laboratory and Hostel facility), research facilities at institutes etc. |
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| Project No. | 474 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | Portal to know about various National and International scholarships based on merit, study field, income etc. |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Simple |
| Description | Portal to know about various National and International scholarships based on merit, study field, income etc. |
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| Project No. | 475 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | Bulk email & SMS Communication Portal |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | • Using this system organizing Bureau/cell will initiate the event by deciding on the following point: • List of various committees (including members) • List of involved Bureaus or cells • Role and responsibilities of all concerned members and committees. Required Features: • Booking of meeting room/auditorium • Communication to all the bureaus/members regarding meetings through email and SMS alerts. • A separate interface to intimate canteen for refreshment/Lunch/dinner arrangements • An interface of this system to update the information on AICTE social media like Facebook & Twitter page. • Report Generation • Activity Log • Dashboard. • Any other relevant features |
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| Project No. | 476 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | AICTE Event/Activity (Workshops, Talks, FDP, Meeting etc) management system. |
| Category | Software |
| Technology Bucket | Software - Web App development |
| Complexity | Complicated |
| Description | • Using this system organizing Bureau/cell will initiate the event by deciding on the following point: • List of various committees (including members) • List of involved Bureaus or cells • Role and responsibilities of all concerned members and committees. Required Features: • Booking of meeting room/auditorium • Communication to all the bureaus/members regarding meetings through email and SMS alerts. • A separate interface to intimate canteen for refreshment/Lunch/dinner arrangements • An interface of this system to update the information on AICTE social media like Facebook & Twitter page. • Report Generation • Activity Log • Dashboard. • Any other relevant features |
| You tube Link |  |

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| Project No. | 477 |
| Company type | Central Ministry |
| Organization | A.I.C.T.E |
| Problem statement title | Mobile App and Web Portal for Officer’s/Officials availability status |
| Category | Complicated Software - Web App development |
| Technology Bucket | Software - Mobile App development |
| Complexity | Complicated |
| Description | An app for officer to update their availability status. Portal to display the same information. In case officer forgets to update their availability status and status may be updated according to GPS location through their phone (at the earliest). |
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| Project No. | 478 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Software platform for affordable healthcare services in rural area |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | It has been observed that the availability of doctors at the PHCs in villages and Panchayat is still a difficult task. Other healthcare services like ambulance is still beyond the budget of the common man. The use of Information Technology in providing such healthcare services at affordable cost needs technological intervention. |
| You tube Link |  |

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| Project No. | 479 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Solution for Controlling and monitoring air and water pollution in urban areas |
| Category | Hardware |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | The air and water of urban area has been polluted and it is increasing every day. The presence of PM 2.5 in air is much beyond the acceptable norms in many of the cities causing respiration disease. A technological solution is needed to curb the pollution to enable the citizen living in clean atmosphere. |
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| Project No. | 480 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Technology solution to improve chield health cand nutrition |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | In rural India many PHCs have been set up under Govt. of India initiatives. But the availability of Doctors, Nurses and health counsellors are still very low. As a result, the delivery of child occurs in absence of expert leading to risk of life of the mother and child. Also, new-born / infant is not getting proper nutrition due to lack of awareness among the rural area despite presence of “Aangan Bari Kendra”. Due to this the infant mortality rate in country like India is high which needs technological intervention. |
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| Project No. | 481 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Development of Website / App to creating awareness amongst women to improve maternal healthcare |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Complicated |
| Description | The death of women during delivery of child in rural area in the country is still a case to be addressed. The lack of awareness in rural areas, the unavailability of doctors and health counsellors in the PHCs, lack of education on women / mother heal, lack of hygiene and sanitation are the prime cause of such death which needs to be addressed. |
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| Project No. | 482 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Encryption of biometric traits to avoid privacy attacks |
| Category | Software |
| Technology Bucket | Security & Surveillance |
| Complexity | Complicated |
| Description | Now a day the declaration of biometric and other personal data has been imposed not only by the Govt., but by many private entities also. There is no proper mechanism and assurance that these data will be kept safe by such agencies. This is a giant problem and the Hon’ble Supreme Court of India has also intervened into this matter. Hence, technological solution must be devised to prevent the loss, misuse of such data on Internet. |
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| Project No. | 483 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Development of Website/APP to assist farmers regarding transportation of fruits and vegetable |
| Category | Hardware |
| Technology Bucket | Waste Management |
| Complexity | Complex |
| Description | The self-life of fruits and vegetable are very short. Due to lack of sufficient infrastructure for preservation and value addition of farm products, a large share of those products gets wasted during transportation and due to non-availability of transportation facility in villages. Focus towards value addition and preservation of farm products will also help in providing appropriate price to farmers. Technological intervention is needed for availability of every corner of the country for curbing wastage of food products. This may solve the starvation problem to great extent. |
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| Project No. | 484 |
| Company type | Central Ministry |
| Organization | DI PATNA |
| Problem statement title | Development of Website/APP to sell/dispose old vehicles and for car pooling. |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complex |
| Description | In last two decades, the sales of two-wheeler and four-wheeler in India has increased many fold. The automobile market is increasing at the rate of 10 % annum. At the same time the old vehicles are also not getting disposed off, resulting in occupancy of storage/parking space and heavy traffic on road. People are also not going for car–pulling and the condition of road are also unsafe. The driving skills of the drivers are also not adequate. The main reason of traffic jam is the vertical growth of the cities. Hence, technology is required for efficient traffic control. |
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| Project No. | 485 |
| Company type | Central Ministry |
| Organization | All India Areca Growers Association |
| Problem statement title | Robotic assitance for pluckig, spraying pesticide and de-husking of dried areca nut with care |
| Category | Hardware |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | De-husking of dried areca nut without making a mark on the nut for maintaining quality. The existing process while de-husking the knife makes a mark Areca tree climber for plucking areca nuts as an enable for plucking Pesticide sprayer upward from ground generating a mist to reach areca nut bunch at the top. The mist must only cover the nut bunch without spraying other portions to save cost and environment. |
| You tube Link |  |

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| Project No. | 486 |
| Company type | Central Ministry |
| Organization | CTTC,Bhubaneswar |
| Problem statement title | Lightening Alert System for Farmers |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Complicated |
| Description | In current scenario it is seen that farmers are dying being victim of the lightning while they are working in the agriculture field/ farm due to lack of advance information of lightning. Such deaths is increasing day by day. There should be some provision of providing the information in advance through Mobile based application and satellite communication to make them alert and leave the place before lightning occurs |
| You tube Link |  |

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| Project No. | 487 |
| Company type | Central Ministry |
| Organization | CTTC,Bhubaneswar |
| Problem statement title | MSME Collaboration Platform |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Complicated |
| Description | Some of the issues hindering problem solving and Knowledge are transparency amongst the organisation are collaboration, innovative culture, and team approach. The Problem solving, and Knowledge Sharing is a critical and vital organizational resource that aids to achieve efficiency, effectiveness, sustenance, innovation, and competitive advantage in the global competitive and dynamic business environment. An Awareness campaign can be initiated by the MSME to the academicians in terms of technical schemes and Quality management programmes/services |
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| Project No. | 488 |
| Company type | Central Ministry |
| Organization | CTTC,Bhubaneswar |
| Problem statement title | Agri Business and Entrepreneurship Awareness System for Rural Youth |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Simple |
| Description | Many of the world’s most disadvantaged youth live in rural communities whose weak economies offer them few possibilities to obtain decent employment and their numbers are growing. For rural youth, new business creation in the agriculture sector can present an important and viable opportunity to earn a decent living. Increasing meaningful employment opportunities along the agricultural value chain can give rural youth the chance to engage in productive work and overcome these challenges. An often-overlooked area of opportunity is the ‘green economy’ (e.g., solar energy, organic agriculture), which has the potential to become a growth sector for rural youth. A campaign on Best Practices for Rural Agricultural Entrepreneurship Programs shall be aroused among rural youths. |
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| Project No. | 489 |
| Company type | Central Ministry |
| Organization | M/s Saphire Media Services, Kaithal |
| Problem statement title | Process automation in printing industry for smooth production and improvement of capacity |
| Category | Software |
| Technology Bucket | Miscellaneous |
| Complexity | Simple |
| Description | We are a new cluster of Signage & Printing industries. We have more than 20 members who are engaged in manufacturing of sign boards and printing of flex, banners etc. the manufacturing/ printing process in our industry is not systematic. We follow the traditional methods. A new stage wise automated system is needed for smooth production and for improvement of capacity also. For managing the manpower, we also require the latest ERP software specially designed for print & packaging industries. |
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| Project No. | 490 |
| Company type | Central Ministry |
| Organization | NKSSIA, Hubli |
| Problem statement title | Requirement of strict policies for recovery of delay payment |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | MSME Samadhan Portal was introduced to tackle the issue of delay payments. But industrial units mention that even after registering the complains in the portal, the recovery of delay payments from third party remains a major cause of concern. |
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| Project No. | 491 |
| Company type | Central Ministry |
| Organization | Dharwad Growth Inds Assn, Belur |
| Problem statement title | Requirement of ESI Hospital and improved medical facilities in each industrial estat |
| Category | Software |
| Technology Bucket | Healthcare & Biomedical Devices |
| Complexity | Simple |
| Description | The ESI/ESIC hospitals are few in numbers across the state and other alternatives are not very common near the industrial estates. Hence, planning and infrastructure ideas are needed to provide urgent and improved medical service near to the industrial estates. Alternative arrangements like local dispensaries or timely visits of recommended doctors and availability of health services should be taken into consideration |
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| Project No. | 492 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Achieve zero wastage of water through RO Water purifiers normally used in an Indian household |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | Currently available Reverse Osmosis (RO) Water purifiers that are commonly used in an Indian household reject 3 l of water for every 1 l of pure drinkable water given. This is not a good ratio considering the rising alarm on judicious usage of water worldwide. Zero wastage and Zero Liquid Discharge technologies do achieve zero wastage of water through RO purifiers but at industry level. The said technologies have not yet been successfully implemented for RO purifiers that are commonly used in an Indian household. So considering the popularity of RO Water purifiers in Indian market, it is high time that we address the problem of rejection of 3 l of water (for every 1 l of pure drinking water given). |
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| Project No. | 493 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Intra city networking for load carrying small vehicles |
| Category | Hardware |
| Technology Bucket | Clean Water |
| Complexity | Complex |
| Description | Currently available Reverse Osmosis (RO) Water purifiers that are commonly used in an Indian household reject 3 l of water for every 1 l of pure drinkable water given. This is not a good ratio considering the rising alarm on judicious usage of water worldwide. Zero wastage and Zero Liquid Discharge technologies do achieve zero wastage of water through RO purifiers but at industry level. The said technologies have not yet been successfully implemented for RO purifiers that are commonly used in an Indian household. So considering the popularity of RO Water purifiers in Indian market, it is high time that we address the problem of rejection of 3 l of water (for every 1 l of pure drinking water given). |
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| Project No. | 494 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Smart garbage vehicles and push carts |
| Category | Hardware |
| Technology Bucket | Smart Vehicles |
| Complexity | Complicated |
| Description | The garbage collection process is tedious, inefficient and time consuming. The process involves manual monitoring and there is no tracking mechanism for the garbage carrying vehicles and garbage load. A new system can be developed to monitor the garbage vehicles in a particular ward of a corporation to obtain optimization in terms of route and garbage collection. The garbage vehicles and push carts can be fitted with sensors and based on the GPS location, the vehicles can be monitored to cover all areas of an ward. The vehicles should be compartmentalized for dry and wet waste to avoid the mixing of garbage. As of now the segregation of dry and wet waste is being enforced in many localities and the same should be followed while loading the garbage vehicles. The push carts used to collect garbage are not designed correctly, most of the garbage spills over the road during transportation. Battery operated carts can replace the existing push carts. In many cities of China, the point to point collection is done by battery operated vehicles and mostly driven by women. A node can be developed for a particular ward and monitored. A new app can be developed to help the citizens to locate the garbage vehicles and the timing of its arrival which helps in proper planning of disposal of garbage. |
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| Project No. | 495 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Advance Traffic navigation system |
| Category | Software |
| Technology Bucket | Smart Communication |
| Complexity | Simple |
| Description | We are aware of Google Map. How it has changed our travel plan for last few years. Little bit enhancement of this navigation system can make our travel plan more easier. Plans:- 1. In Bangalore usually we see for any rainy day, suddenly queue of cars will come here & there where rain water accumulated. All the bikes avoid those rain accumulated places as a result 4 wheeler s also will suffer. So, if our navigation system enhanced with these info where rain water accumulated, commuters can plan to avoid those places in advance. As a result they can save their time, fuel consumption etc. 2. Google map shows which route will take more time, how many kms we need to cover. Within our selected route also, if we can improve our navigation system where potholes, speed breakers are there 4 wheeler drivers can plan in advance, it will save time as well as it will create less damage to the car. Please think about it. |
| You tube Link | <https://www.youtube.com/watch?v=QW9dFj6qDTo> |

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| Project No. | 496 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Sunlight uses in IT office |
| Category | Hardware |
| Technology Bucket | Energy / Renewable Energy |
| Complexity | Simple |
| Description | We are aware of Google Map. How it has changed our travel plan for last few years. Little bit enhancement of this navigation system can make our travel plan more easier. Plans:- 1. In Bangalore usually we see for any rainy day, suddenly queue of cars will come here & there where rain water accumulated. All the bikes avoid those rain accumulated places as a result 4 wheeler s also will suffer. So, if our navigation system enhanced with these info where rain water accumulated, commuters can plan to avoid those places in advance. As a result they can save their time, fuel consumption etc. 2. Google map shows which route will take more time, how many kms we need to cover. Within our selected route also, if we can improve our navigation system where potholes, speed breakers are there 4 wheeler drivers can plan in advance, it will save time as well as it will create less damage to the car. Please think about it. |
| You tube Link | <https://www.youtube.com/watch?v=QW9dFj6qDTo> |

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| Project No. | 497 |
| Company type | State Ministry |
| Organization | Robert Bosch Engineering & Business Solutions Private Limited |
| Problem statement title | Digital India-Smart Subsidy System |
| Category | Software |
| Technology Bucket | Agriculture and Rural Development |
| Complexity | Complex |
| Description | A great extent of time is wasted under supply chain and significant truthful beneficiaries are bereft of government subsidized schemes. Government subsidized items like fertilizers, housing schemes (Indira Awas,land etc.), pension schemes, medicines, rationing items (wheat,sugar,kerosene) enormous amount of time is wasted in supply chain and that results in wastage of huge amount of items, delayed delivery of the items etc. Also due to other various reasons in some cases subsidized items/schemes does not reaches to the truthful beneficiary. To address & ensure government schemes are reaching to the beneficiary in the timely manner, A Blockchain based ecosystem can be developed in order to monitor, track and ensure reduced supply chain time and desirable beneficiary is benefited under the government schemes. |
| You tube Link | <https://www.youtube.com/watch?v=egIrU-HjSqE&featur> |